

THE

Desert

M A G A Z I N E



MAY, 1941

25 CENTS

LETTERS

Credit to Fray Garces . . .

Mission San Antonio de Pala
Dear Mr. Henderson:

Your magazine is one of the most interesting on the market. It is a credit to the Southwest.

I would, however, take objection to depriving my brother Franciscan, Fray Garces, of the honor of founding Tucson's first mission.

Father Kino, indeed visited the two Indian villages, formerly located on the present site of Tucson. He even held services at these places. Doubtlessly he planned a mission here. But in reality he did not get further than to place these villages under the tutelage of patron saints.

The only missions founded by Kino in Arizona were San Xavier del Bac, some nine miles south of Tucson, and Guebavi near Nogales. Tumacacori and Quiburi were founded after the death of this intrepid missionary.

There is no mention of a Tucson mission until the time of the Anza expeditions. At that time when Fr. Garces was in charge of the district around Tucson, the mission was founded.

For information on this subject consult Dr. Lockwood's "Tucson, the Old Pueblo."

FR. BONAVENTURA OBLASSER OFM.

Father Bonaventura: Thank you for the correction. Desert Magazine made the error, common among lay readers, of regarding Xavier del Bac as the original Tucson mission, although it actually is located some distance outside the present town-site.
— R. H.

Gila Monster . . .

Las Vegas, Nevada

Dear Sirs:

In marking answers to your questions on page 24 of the April copy, I marked all correct, then looked in the answers on page 37 and found you listed Gila monster as poisonous. This is false as I saw one man bit that put one inside his shirt in Searchlight two years ago. Several others whom I know were bitten and had no evil effects. The fellow from Searchlight was treated by Dr. Woodberry of this city, who said before treatment that the Gila monster had no poison and the wound wouldn't even swell, which proved true.

I've been 41 years a prospector, with time off hunting burros and fixing flats.

T. J. DOBBINS.

Old timer: The question of a Gila monster's poison is always open to controversy. I believe many of the authorities agree on this theory: That the G.M. does not eject poison as does a rattler, but rather that the poison sacs are located in his jaws and the venom is released in the same manner as saliva. Thus the victim becomes poisoned only when the monster closes his jaws on the victim and hangs on for sufficient time to permit the poison to reach the wound. When the reptile's grip is broken immediately there may be no poisoning. The official records of Arizona list one death from Gila monster poisoning in the last nine years.
— R. H.

Desert Philosophy . . .

Alexandria, Va.

Dear Sir:

I have been a subscriber to the Desert Magazine for over a year. I find it a very nice magazine. I particularly enjoy the beautiful photographs and the articles by Marshal South.

Are there to be no more articles by Marshal South? It would seem to me that if the desert teaches man anything it would be to have a philosophical outlook on life and that, because of his way of life Marshal South is well qualified to express desert philosophy. Please note the following quotation taken from the December Desert Magazine. "For after all an understanding of conditions is the first step toward mastering them."

Why not continue with a series of articles, a little less personal perhaps, but giving him a wider range of expression. Whether he knows it or not he is qualified to give from his abundant experience, help which is very much needed in this troubled world of today. The desert remains—untouched by "isms" and "ain'ts"—it stands unscathed by mankind's trials, a sort of monument to Divinity expressed in Law immutable.

Your magazine, with a little touch of philosophy here and there as indicated would be even more fascinating than it is now.

MARY R. HYDE.

Lost Gold . . .

Los Angeles, California

Dear Sir:

I enjoy your magazine very much as I am interested in the desert and take trips on the side roads whenever I have time. I have also read the stories of lost mines and have had a personal contact with one similar to that in your February number, which brought it back to my mind.

About 15 years ago I was working a night shift here in Los Angeles. Each night several of us would eat our dinner at a restaurant near the shop. One night our waiter friend was all excited.

He told us some eastern relatives had just come to visit his next door neighbor. The party included a man, his wife, and two children. Also a brother.

After driving a short distance past the California state line the party took a short cut on a little known road. One of the tires went flat and while the two men were fixing it the children went out to play in a nearby wash.

The little boy soon came back to the car and showed his dad a handful of "pretty sand" and wanted to take some of it to Los Angeles. The father filled several sacks and brought them along.

When they arrived at their destination the children wanted the sand to play in. But when the neighbor saw what was in the sack he insisted that it be taken to an assayer. The sacks yielded nearly \$3,000 in gold.

A party was organized to return to the spot where the sand was obtained, but not much attention had been paid to landmarks on the trip through, and they were never able to locate it.

E. H. MEHL.

Tougher Automobiles . . .

Honolulu, T. H.

Dear Sirs:

Enclosed is check for a copy of "On Desert Trails with Everett Ruess."

Just two weeks ago today I was enjoying myself on a 15-day trip in the desert at Vallejos stage station and vicinity. Now I am writing from Honolulu. Thanks again for the fine magazine you are publishing. And keep up your efforts to get the auto makers to build a car suitable for desert travel. When I retire from the navy I'll want to have one of those cars to drive the desert with, thanks to your efforts.

WALTER LEE WOLFE.

Blessed Poet . . .

Selma, California

Dear Mr. Henderson:

Here is one more alleged poem for your files—it is one that your comment on the effusions of "we poets" in April Desert, brought forth—so blame yourself, my lad!

WHEN SPRING COMES

The while the flowers put forth new leaves,
And fresh and fragrant petal,
The "poet" bites his pen, and heaves
Vast sighs—and tries his mettle.

The air is full of pale green rhymes,
And pinkish, dainty meter,
We love to ring the 'bluebell's chimes,'
And 'bird on branch,' to teeter.

Our every thought is 'strung with dew,'
Our 'stars shine clear and bright';
Our 'violets are nodding', too,
'Black velvet,' is our night.

Our 'fleece clouds' scud swiftly by,
Our 'clover scents the breeze,'
Our 'yellow beaked fledglings' cry
From 'nests in swaying trees'.

We clog the mails with sticky verse,
We're pests, and well we know it!
But every spring we break out worse,
And these lines plainly show it!
Forgive us please—

HAZEL GOFF.

Thanks Hazel—if all the poets had your sense of humor the poetry editor's job wouldn't be so bad after all.—R. H.

Paging Marshal South . . .

Moab, Utah

Dear friends:

Since coming to this desert place with its unusual inspiration and distinctive beauty I have realized the unusual value of your magazine.

I am writing to tell you how much those of us in this little settlement are missing the letters of Marshal South. It is a rare and wonderful thing when human beings face problems and conquer them gladly and with such good humor as the Souths have done.

With appreciation and all good wishes.

SUZANNE C. DEAN.

Ingot of Gold . . .

Cupertino, California

Dear Mr. Henderson:

I feel that I must take issue with the anecdote on page 30 of your April number, relating Mr. O'Reilly's difficulty in lifting an ingot of gold.

I have had four years experience in assaying and melting gold, and this is the way I figure the story from the data given: The bar was worth \$49,500. Assuming that it was nearly pure gold the bar would weigh 1,414 troy ounces or 117.8 troy pounds, which is 106 avoirdupois pounds. However, I would guess the fineness about 800 fine, and that would raise the weight to 145 pounds, which, while heavy, should not be too heavy for a grown man to lift to his shoulder.

If the fineness were low the weight would be great enough to give veracity to the story, but as the story stands it tends toward carnival sensationalism.

True, gold is very heavy in small volume, and the uninitiated often rashly underestimate the weight of any given parcel of gold—but I believe you are the victim of an exaggeration in reporting.

F. V. LEFEVER.

DESERT Calendar

- APR. 28-MAY 1 Southwestern division, American Association for Advancement of Science, to hold 21st annual meeting, Lubbock, Texas.
- APR. 30-MAY 2 Women's Aeronautics association meets, Albuquerque, New Mexico.
- MAY 1 Dedication of Albuquerque municipal airport and army airbase.
- 1-3 State convention of Arizona Veterans of Foreign Wars and auxiliaries at Mesa, Arizona.
- 2 Masque of the Yellow Moon, 16th annual dramatic production of Phoenix, Arizona schools.
- 3 Santa Cruz day, Indian dance and ceremonial races, Taos Pueblo, New Mexico.
- 3-4 Final performances of Ramona Pageant, Hemet, California.
- 3-5 Annual Fiesta de las Flores, Nogales, Sonora, Mexico.
- 3-6 Junior fat stock shows at Spanish Fork and Delta, Utah.
- 7-10 Arizona state Golden Gloves boxing tournament, Phoenix.
- 8 Boomtown Spree, Miami, Arizona. Johnson Fanning, chairman.
- 8-10 Old Calico Days, rodeo, pageant and carnival on Tom Williams ranch, near Yermo, California.
- 8-22 Exhibit of Arizona Pictorialists, Phoenix photographic club, at Museum of Northern Arizona, Flagstaff.
- 9-11 Annual rodeo, Douglas, Arizona.
- 10-11 Wildflower show opens in Julian, California. Town hall, free admission. Also May 17-18, 24-25, 30-31, June 1.
- 10-11 Sixth annual convention of California Federation of Mineralogical societies, Oakland. B. E. Sledge, chairman.
- 11-16 Riverside Riding club to ride old Anza trail from Yuha well in Imperial county, California to Riverside.
- 15-18 Federation of Natural Sciences of Southern California meet in annual convention in Hancock Foundation building, U. S. C., Los Angeles.
- 16-18 Hellsdorado celebration and rodeo, Las Vegas, Nevada. E. W. Craig, rodeo chairman.
- 25-JUN. 9 Navajo silver jewelry exhibit at Museum of northern Arizona, Flagstaff. Fine collection old and modern pieces, loaned by Laboratory of Anthropology, Santa Fe, New Mexico, and Denver Art Museum, Denver, Colorado. Also sketches of Southwestern Indian types, by Eben F. Comins, of Washington, D. C.
- 26-28 Annual convention, New Mexico State Firemen's association, Hot Springs.
- 27-28 Uintah Basin livestock show, Vernal, Utah.



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RANDALL HENDERSON, Editor.

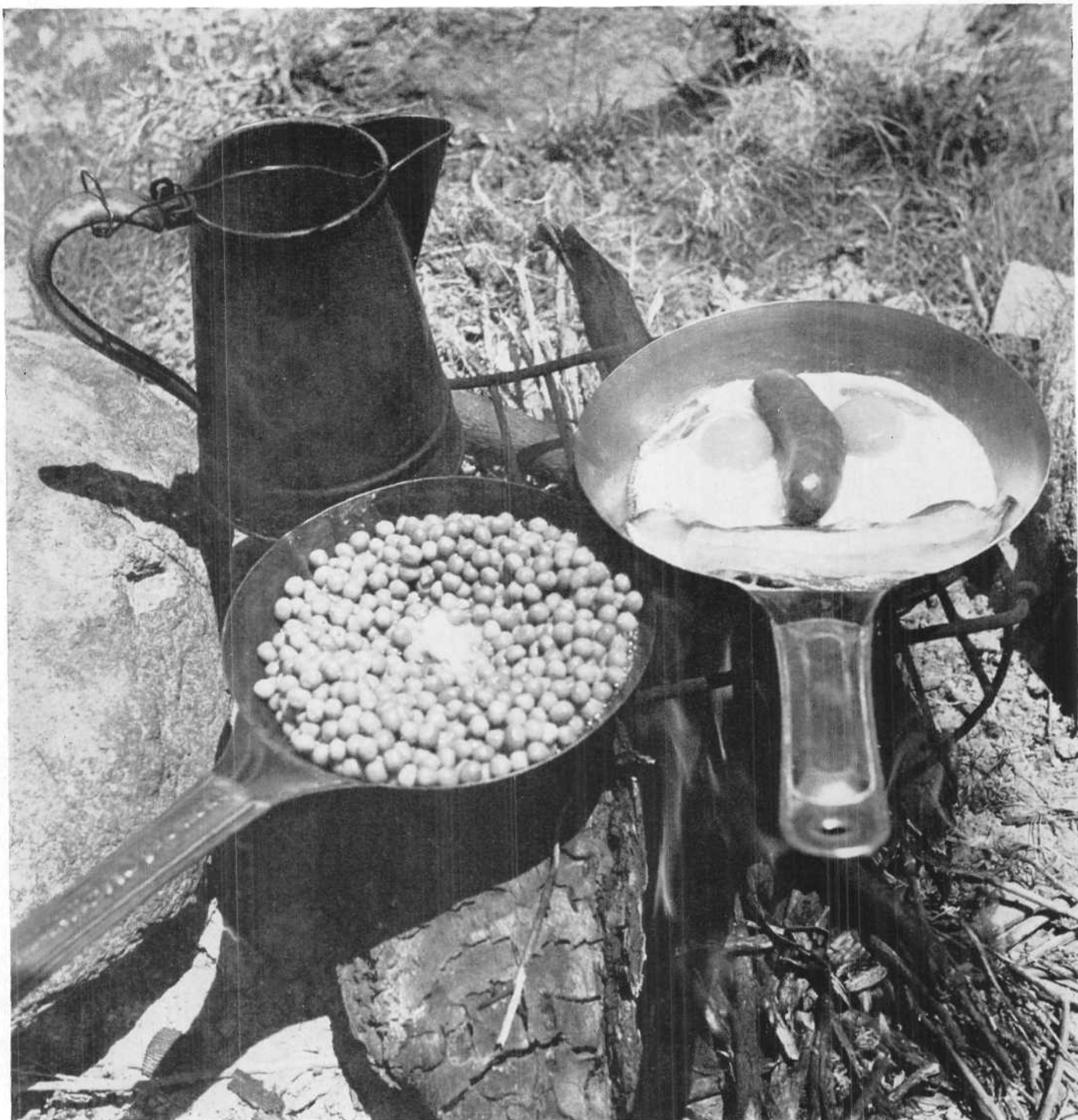
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Desert Breakfast

By LEONARD RICHARDSON
Escondido, California

Awarded first prize in the March photographic contest conducted by Desert Magazine, this picture was taken with a Rollicord camera, Plus X film, 1/15 sec., at F:18.

Special Merit

Considered by the judges to have outstanding merit were the following entries:

"Screwbeans," by Robert R. Nicholas, Redding, California.

"Desert Grave, Twentynine Palms," by Ralph D. Cornell, Los Angeles, California.

"Smoke Tree," by Eldean Olsen, Santa Monica, California.

"**SUNSET SILHOUETTE**" by June De Bella of San Jose, California, which was awarded second prize in the March photographic contest is reproduced on the poetry page of this Desert Magazine. It was taken with a 2¼x2¼ Voightlander reflex camera at F:16 at 1/25 second, yellow filter.

Wildflowers on Parade

THIS is the Desert Magazine's wildflower forecast compiled as of April 1, with information as to where flowers may be expected during the latter part of April and early May.

In some of the lower levels the blossoms reached their peak early in April, but on the elevations above 2000 feet the most colorful displays will not appear until after the 15th or 20th of the month.

Generally speaking, the wildflower display this season is the most gorgeous that has occurred in many years—the plants are luxuriant, the coloring rich, and the landscape over much of the desert area literally carpeted with whites and yellows and blues and crimsons, with scores of tints for which there are no adequate descriptive words in the dictionary.

ARIZONA

Making a tour of the Papago Indian reservation west of Tucson late in March, Louis R. Caywood, custodian of Tumacacori national monument, observed solid masses of desert mallow and California poppy on the hillsides. On the road from Tumacacori to Nogales, he found many fields of orange and white poppies and desert dandelion in bloom. Some lupine and verbena were beginning to bloom. In this area the ocotillo was just beginning to bud, as were the cacti.

A report from Mrs. M. H. Starkweather of Tucson at the end of March indicated not only that this April will be one of the most spectacular for southern Arizona in many years, but motorists may expect to see a great many blooms all through May and June. Yuccas, Saguaros and prickly pears will all be in blossom.

She especially recommends trips to the following areas:

Box canyon (take U. S. 80 to Mountain View service station 21 miles east of Tucson; turn right and watch for road sign), for its display of *Penstemon spectabilis*, one of the largest and showiest of the penstemons, 3 to 5 feet high with rosy violet tubular flowers;

Saguaro national monument (reached by driving east on Broadway, Tucson), where thousands of acres of Saguaro cacti will be blooming;

Garden canyon (take U. S. 80 from Tucson to Tombstone and follow signs), for the fine Chilopsis or desert willow, which will be blooming in May and June, as well as hundreds of other species;

Silver Bell road (25 miles northwest from Tucson), where there are sections of orange, white, pink and red poppies, rosy pink owl's clover and fiddle neck.

In the Organ Pipe Cactus national monument near Ajo, Custodian Bill Supernauth reports that nearly all the cacti will be in bloom by May. The hedgehog and staghorn started at the end of March, and by May 1 the Organ Pipe and Senita will be starting. At that time the Saguaros and chollas will be at their peak. Both the Organ Pipe and Senita should be well worth a visit—they are nocturnal flowering, with pink and creamy white blossoms.

Aside from the cacti, the Ajo area will provide color in the blossoms of Palo Verde, ironwood, mesquite, catsclaw and smoke trees, according to Mr. Supernauth.

NEVADA

Visitors to Boulder dam during the latter part of April and May will be in time to take advantage of the delayed blooming period, according to Guy D. Edwards, superintendent of Boulder dam recreational area. Because the abundant winter rains were accompanied by cool weather, flowering is later but promises to make up for it in quantity and length of season. Late in March, Mr. Edwards reported blooming of golden poppies along the roadside between Boulder City and Boulder dam and along connecting roads to the beach and boat landing on



April is the month for Ocotillo blossoms. The flowers are a rich scarlet and the blossoms are so profuse this year that some of the slopes along the foot of the desert mountains have the aspect of a red landscape.

shores of Lake Mead. At the same date, Joshua trees were just beginning to bloom on the road to Pierce Ferry, which leaves the Boulder City-Kingman highway about 50 miles southeast of Boulder City. The Indian paintbrush was also beginning to appear.

After April 1, Mr. Edwards expected the Ocotillo to be blooming profusely in the western portion of Grand Canyon above Pierce Ferry, and by the middle of April he expected the whole recreational area to be bright with golden hills, desert dandelion and apricot mallow.

MOJAVE DESERT

Antelope valley the first of April was colorful with vast fields of poppies, thistle sage, desert gold, birds-eye gilia, cream cups, lupines, coreopsis, and Joshuas, according to R. E. Lofinck of Lancaster. He predicted most of these varieties could be seen through the month of April, and the following would be in full bloom to the end of the month: evening primrose, lupines, heliotrope, verbena, desert candles.

Those who visit the Randsburg-Trona district, in the Mojave desert of California, are more likely to find excellent individual specimens than massed effects. At least, this was the indication late in March, when Howard A. Bell of Trona prepared a preview of the flower show for that area. Between Trona and

Searles the beavertail cactus was heavily budded and the apricot mallow showed fine progress, though it was hardly blooming at that time. He found Mariposa lily plants in sections where they do not normally appear. And though desert asters also were not yet in bloom, the plants showed good growth.

In the hills between Trona and Randsburg, Mr. Bell observed excellent phacelia and coreopsis. Apricot mallow and large yellow evening primrose were appearing in the canyons. Owl's clover was making an unusual showing about 10 miles north of Trona.

Flower prospects in northeastern Mojave desert are good for a long season, wrote Elmo Proctor of Cronese about April 1. It is quite possible, he believes, that such an unusual year may produce species unlisted as indigenous to that section.

Asters and lilies, continues Mr. Proctor's report, began blooming March 20 and promise a long season — probably through April for the lilies and longer for the asters. Three varieties of dandelion and evening primrose will be profuse through April unless drying winds cut the season short. Sunbrights and buttercups should also continue through April. Verbenas, he predicted would be lining the roadsides until fall.

Several cacti began blooming in April and others will follow in order until the season ends in the fall with the mountain species. For the next several months, these are the outstanding flowers — sages, brooms, mallow, four o' clocks, paintbrushes and desert candle.

The Devil's Playground, southeast of Baker, Mr. Proctor predicted, will be a garden spot of lilies with cacti on the sides for the next few months.

The central Mojave area at the end of March was not making the showing expected by Mary Beal of Daggett, earlier in the season. Though the whole area was not a flower garden, Miss Beal reported many stretches of arresting color. Wherever these patches did occur, she found a combination of lavender-violet Fremont phacelia, coreopsis, blazing-star, dandelion, pincushion and fiddleneck phacelia. Others seen blooming in March were forget-me-nots, woolly breeches, evening snow, Mojave poppies, basket evening primrose, sand verbenas and gilias.

Based on her March observations, Miss Beal expected the following to be blooming by April 15: pincushion, dandelion, lilies, asters, larkspurs, lupines, linanthus, apricot mallow, five-spot mallow, desert star, gold mats, sun-cups and desert candle.

Motorists entering the Mojave from the west will find a spectacular display of the Lord's Candle and Joshua trees. According to F. A. Wolz, secretary of Palm-dale chamber of commerce, the blooms should continue from late April to the end of May. The poppies, which he reported just beginning to bloom at the end

of March should survive the month of April.

Along the highway to Twentynine Palms at the end of April there still will be areas of dandelion and clumps of bright yellow *Baileya*, with creosote in the higher levels, according to H. W. Jones of Kodak Rancho, Twentynine Palms. *Geraea* or desert sunflower and locos in several colors will be found blooming into May along the graded road to Dale, 15 miles east of Twentynine Palms. He also includes desert senna, for bloom on the slopes around Twentynine Palms.

Reporting for the Joshua Tree national monument, Superintendent James E. Cole writes, "In general it appears there will be a generous wildflower display this year with the climax being reached the latter part of April for elevations corresponding to Twentynine Palms. At lower elevations, such as Pinto Basin, the season will be advanced about two weeks, while in the upper part of the monument the flower season will be retarded from two to four weeks." Recent improvements within the monument will make easily accessible many roads hitherto little traveled by most desert motorists.

COLORADO DESERT

Reporting for northern Coachella valley, along the southwestern base of the Little San Bernardino, Cabot Yerxa of Garnet lists as the most conspicuous varieties for April and May blooming the encelia, lupine, chicory, verbenas, creosote, evening primrose, dandelion, forget-me-not, purple and chia sages, beavertail and cholla cacti. For this area, leave U. S. 60-70-99 at Garnet.

The eastern Colorado desert, comprising principally the Chocolate and Chuckawalla mountain areas, gave promise of a rich variety of bloom as early as March 22 when Eva M. Wilson of El Centro made a survey of this region. About Beal's Well there was a considerable showing of encelia or incense bush and purple phacelias.

Greater variety and quantity were found in the Chuckawalla area, where the following were most conspicuous: encelia, purple mat, phacelias, white sage, desert gold and little golden poppies, white thistle poppy, crimson desert mimulus, white desert star and Mojave yucca. Most outstanding were the orange-scarlet mallow, with unusually large flowers.

East of the Chocolates, in the Little Mule mountain area, there was a rich showing of desert mallow, encelia, phacelias and purple mat. The washes particularly were ablaze with this combination. There were carpets of purple mat, gold blotches of encelia to the tops of the hills, profuse *geraea*, five-spot mallow among the brown rocks of the geode fields, extended patches of desert star and large areas of white-starred desert chicory.

Turning south from Palo Verde to-

wards Midway Well, Miss Wilson's party found beavertail cactus in its prime and very numerous. The five-spot mallow, ghost flower, phacelias and *geraea* were conspicuous, and small pink lupines lined the roadway. Encelia and pink carpets of purple mat were everywhere. At Midway Well was the only showing of chuparosa.

Still farther south, towards Ogilby, were the fairy dusters, their numerous long stamens making their pink-and-crimson heads as fairylike as their name.

While the flowering season of the annuals reached its peak in Borrego valley about April 1, many of the most colorful perennials will not be at their best until later in the month.

Dandelion was the predominating flower on the floor of the Borrego valley this season, great areas of it turning the landscape to a vivid yellow. White chicory was in second place. The following flowers were at their best the early part of April in this area: dandelion, chicory, encelia, fiddleneck phacelia, chuparosa, verbenas, evening primrose, lily, pincushion and monkey flower.

Ocotillo which is especially abundant in the Borrego region will be at its prime toward the middle of April, and Agave will not blossom until the end of the month. Indigo bush was just beginning to blossom the first week in April and will continue until late in the month. Many beavertail cactus blossoms were out but the buds will continue to open throughout the month. Palo Verde began blossoming early in April and will continue until after the middle of the month. Bisnaga, cholla and buckhorn will be blossoming all through April.

One of the most colorful displays in the early part of April was supplied by the little red monkey flower that grows close to the ground on the rocky slopes. Chuparosa will be blossoming throughout April, as will lupine on the higher slopes. Purple loco weed also is much in evidence along the washes and will be seen until after the middle of April. Borrego badlands are covered with *geraea* which will be blossoming all through April.

Most conspicuous flower display on the Yuha desert west of Calexico during April will be *geraea*, the floor of the Yuha basin being literally carpeted with the golden flowers. Desert lily reached its peak in this area the first week in April but some blossoms will be found until the latter part of the month.

On the slopes around Coyote wells along Highway 80 the landscape will be covered with the scarlet plumes of Ocotillo by the middle of April. Beavertail, bisnaga and other cacti will be blossoming throughout April, according to altitude. Lily season passed its peak early in April in this area, but Indigo bush will be displaying its deep purple blossoms until late in the month.



Through the Navajo grapevine, word quickly went out over the reservation that a sing was to be held in Canyon de Chelly and some of the Indians rode long distances to be present.

Navajo Sing

By JOYCE ROCKWOOD MUENCH
Photographs by Josef Muench

Joyce and Josef Muench make periodic trips into the Navajo country in northern Arizona to add new pictures to the fine collection which adorns their photographic studio at Santa Barbara, California. On their most recent visit to the Navajo reservation they were present at one of the tribal ceremonials in scenic Canyon de Chelly. It was an emotional experience never to be forgotten — and Joyce Muench has written about it for *Desert Magazine* readers.

IT was in the spring that a snake ran across the path of Nescayazzie, the Navajo. That was a bad omen. It made him restive all the next two months. Then when his wife Sally began to complain of pains in her joints, he decided it was time to have a sing.

Of course, it would cost many sheep and some dollars beside, to feed all the Indians who were sure to come, but the host and hostess would have the benefit of purification and cure, plus the satisfaction of entertaining the countryside.

Word spread quickly, thanks to the efficiency of the Navajo grapevine. By word of mouth the invitation went—far up the canyon to the family that dwells beneath the ruins at Mummy cave, down to Chinle and out across the Black mesa—yes, they would all come. No one needed to know the name of the host—it was necessary only to know the place and the time.

The first night's ritual was set for a

grassy plot six miles up Canyon de Chelly. The Indians began to gather the day before. Some of the girls who lived in hogans far from the edge of the canyon spent that whole day in travel, dressed in their best clothes and laughing merrily as they rode along.

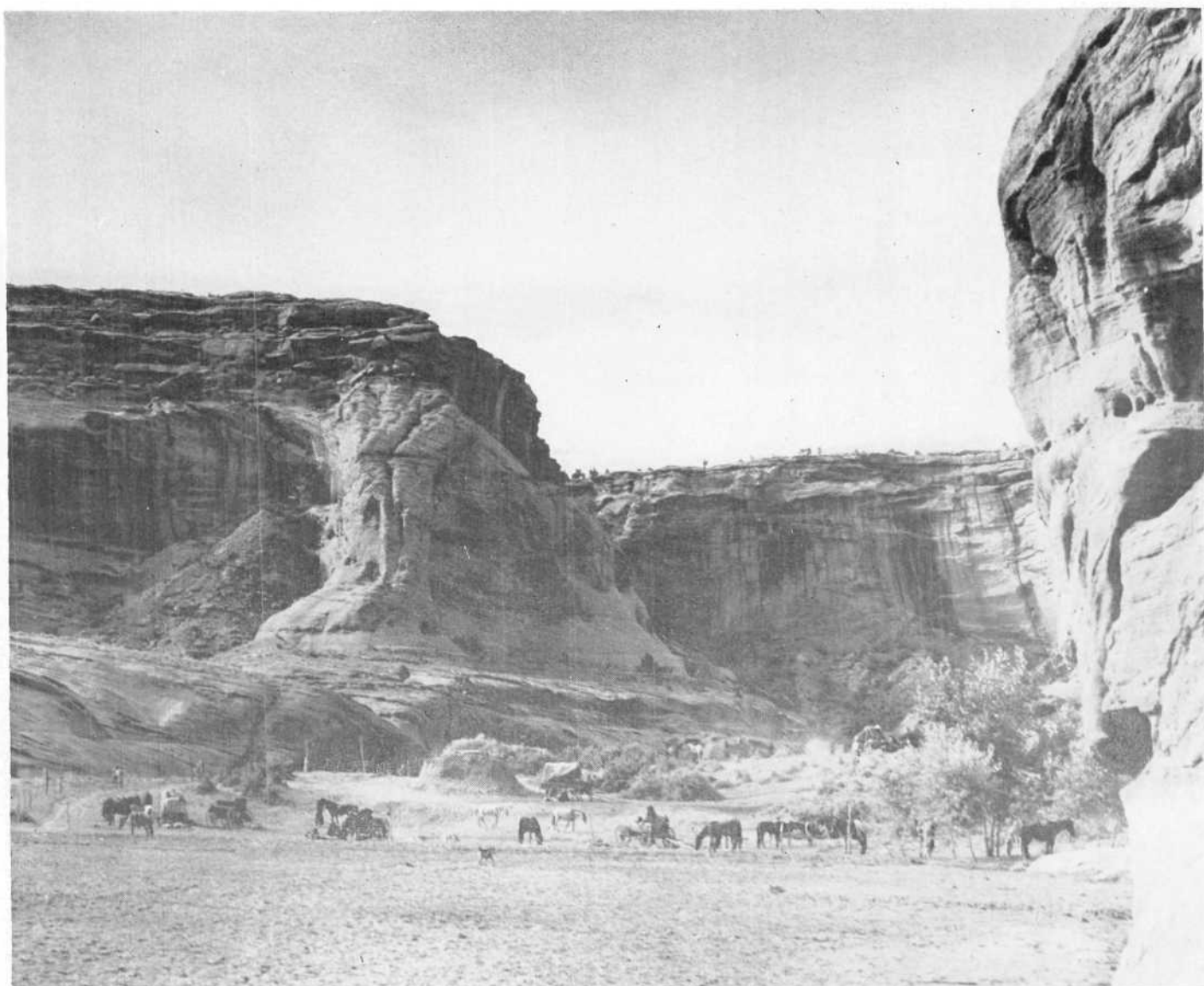
All Indians are fond of ceremonials and the Navajo is particularly fond of a sing. Covered wagons rolled along the sandy floor of the canyon, carrying whole families. Solitary riders or hikers appeared for an instant silhouetted against the sky along the top of the cliffs that rise precipitously on both sides of the canyon—then disappeared as they followed trails known best to these natives who live close to the earth. There were automobiles too, shiny new cars and pickups, and others that creaked and groaned as they bounced along over the ruts that followed the winding course of the canyon.

Nescayazzie and Sally were not among

those who journeyed, nor were they busy preparing things where the sing was to be held. Their hogan was far away and the medicine man "Wide Hat" was to spend the three nights there performing rites. His was a long and ever changing performance, full of the old magic that has been brought down through generations from father to son to grandson. It is full of Indian music and imagery. It is a tribal ceremony—not for the white man to see. It is only when the ritual reaches its later stages in the squaw dance that he is an acceptable guest—perhaps even a welcome guest for he often is impelled to play a role that is profitable to the Indians.

Night comes swiftly to Canyon de Chelly. When the sun touches the tops of the cliffs with a last fleeting gleam, darkness already has reached the floor of the canyon. For the walls rise almost vertically, 300 to 500 feet of sheer red sandstone.

These precipitous walls have their ad-



The first night's ceremonial was held in a grassy cove far up in Canyon de Chelly. The Indians began arriving the day before, horseback, on foot, in wagons and automobiles.

vantages for the Navajo. Many generations of Indians have practically denuded the canyon floor of wood that is suitable for campfires. But on the plateau above piñon and juniper grow in abundance, and it is a simple matter to toss it over the rim and let it slide down the smooth rock face to a convenient point below.

When darkness came, the fires were lighted and the sing began. It had been prefaced by a feast and then a tribal council. At the close of that, a few of the older men drew together, down near the grassy plot reserved for the dance. One began, with a high piping voice. He was seconded by another, and gradually, almost like a round, other men joined them. For five minutes a full sound of song continued, and then was cut off sharply. There was a second of breathless quiet, when the canyon itself seemed to be listening.

Then a high voice started again and into his song others built with astounding

artistry until again the crescendo grew like a living thing and then was gone. The cliffs, partly lighted by the moon, part in deepest shadow, reflected the sound as a smooth stream shows a reflection. This chorus of men's voices, untrained, voicing age-old melodies, with words in a strange tongue, weaves a magic spell on the listener.

There was not just one chant but a whole series of them, coming in an order seemingly known only to the leader who started the song each time. On the sidelines we found variety after a time, not alone in the words but in the emotional content of the chants. The performance had a strange quality that goes to the very roots of human emotion.

It is this, the essence of the sing that gives healing power to the ceremonial. The dance which followed was purely social. As to whether or not the singers have the welfare of the sick person in mind while they sing, is a question not easily answered. But if there be power in song

to cure human ills, one can well believe that this is an effective way to call it forth.

The color of the setting would have made the hands of a painter itch to be at work. The singers were at one side of the large circle, the fire not quite in the center. Now and then an Indian, with a bright blanket over his best clothes, would stroll over and extend his hands to the warmth of the flame. The evening was growing cooler. The flickering light showed fitfully on faces around the edge of the circle. Covered wagons filled in the background and beyond them horses were tethered, chewing contentedly on hay that was put in the wagon for the purpose. Children were asleep in the wagons and underneath were dogs, and here and there a pile of blankets with perhaps a man inside.

It must have been eleven when the chorus broke off the chant and no other voice picked it up. But suddenly there was move-

ment everywhere. Figures rose up out of blankets in the darkness. The circle cleared again and a tall slender Indian girl in the beautiful Navajo costume began making a round of the circle, holding aloft a sacred wand. This was the long awaited signal for the beginning of the dance.

A girl led a man into the circle and they locked elbows, facing in opposite directions and went round and round with short, padding steps. A new and smaller chorus had formed around a young man beating a tom-tom. This was the dance orchestra. More couples found courage to join the dancers and soon the whole part of the circle away from the fire, was moving. As the firelight rose and fell, the dancers were visible to those sitting quietly in the shadows.

Only the unmarried women may take part in the dance, and some of the girls did not appear to be over 10 years of age. All men are eligible—but it is the young ladies who choose their dancing partners. Because they are shy, the girls are likely to pick strangers—and that includes the white men who may be present. Perhaps there is another reason for the popularity of white men at these dances—they are generally better supplied with dimes. At the end of the dance the man pays.

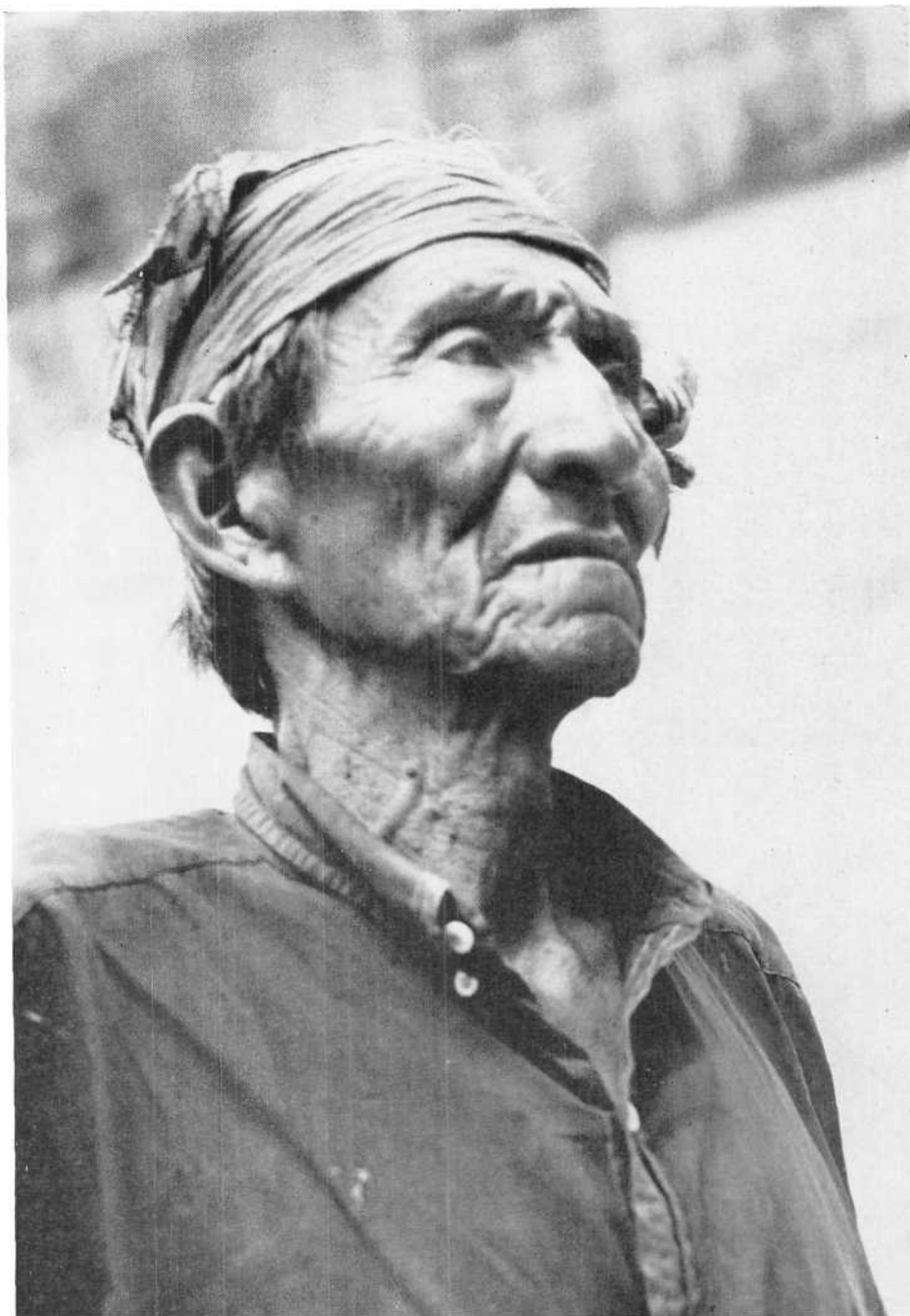
Elizabeth and Helen, daughters of Red Feather, were at the squaw dance for the first time in their ten years of life. The twins were dressed almost alike, and even had the light been less wavering and dim, the men at the edge of the circle would have found it hard to decide which was Helen and which Elizabeth. They were little mites of girls and their long velveteen skirts, with eight yards of material in each fell down over their ankles, showing only the tips of their high laced shoes.

They each wore the traditional blouse of velveteen. A string of fine turquoise hung around each neck and the coal black hair, usually blowing about was fastened in the long tight knot, tied with a ribbon. A shawl completed the costume.

The girls had taken their places, and when the wand bearer had completed her round, a small hand grasped the coat sleeve of a white man seated in the circle. The little Navajo girl gave a gentle tug and he rose and was led into the circle. There, the magic of the dance laid hold of him and he lost his identity and became as much a member of the Indian group as the braves around him.

After a long period of dances, for there were no regular intermissions, the white man who was still firmly in the grip of Elizabeth, urged her into the open circle made by the dancers. There, after he took a coin from his pocket and put it in her hand, she let him go. So it was with other dancers. Sometimes it was the girl who wanted the dance to end, and sometimes the man.

This was all ladies' choice and every dance cost the man something.



Wide Hat, Navajo medicine man who knows the ancient healing rituals, and is called upon to disperse the evil spirits that bring pain and ill fortune.

The mother of Helen and Elizabeth, herself barred from dancing, spent her time in rounding up eligible men for the twins to dance with. She used a large flashlight and ferreted out all of the dark corners. If the supply of men seemed to be running low, there was no ban against asking the same man a second time and thereafter exacting double tribute.

There was no talking among the dancers. The step changed, now there was one double circle moving in the same direction. The uneven ground caused no worry. When there was a small hillock, they merely danced over it. The chorus stopped for breath now and then, or the dancers thinned out, but there was no stopping. There would be none until dawn.

When the stars faded away and a pale

light began to flood the canyon, the last of the dance's melted away and the chorus forgot to begin a new chant. The tom-tom was stilled and quiet reigned over the sandy floor of Canyon de Chelly.

The faint tinkle of a bell could be heard from the top of the canyon walls. Anyone who was then awake would have seen a small herd of goats peering over the edge, upon the sleeping encampment. Then a small and very ragged boy joined them for a moment before he shooed them along on their way. As he pursued them, he raised his childish treble in imitation of the elder's song. A strange sound. There is no other like it. It floated over the canyon and struck the opposite wall. There, it was tossed back again and again until it died away among the crevices and was lost.

The bonanza days in the Death Valley region have long since passed, but grizzled prospectors are still picking away in the hills, confident that rich ledges of gold and silver are yet to be uncovered. Ballarat was one of the boom towns in that area in the late 'nineties. Only crumbling walls and a few weathered shacks remain on the treeless landscape to mark the site of the town today but some of the veteran mining men still spend their winters there—and Ballarat will never die while these old-timers remain to recall tales of the past and keep their faith in the new strikes yet to be made.



This is the double-boarded jail of old Ballarat, where the doors were never locked.

They Never Locked the Door of the Jail at Ballarat

By LeROY and MARGARET BALES

A ghost town with living inhabitants—that's Ballarat. Standing on a treeless desert horizon at the foot of California's Panamint mountains, its roofs are mostly gone, its walls are crumbling away—but in a few of the ancient shacks still dwell men "who knew the town when."

They are a restless lot, these surviving desert rats of the old days—here today, tomorrow somewhere in the mountains 20 miles away. They come and go like the ghosts of the gala, golden era in which the town sprung into being.

Panamint Tom, the killer Indian; Shorty Harris, the most successful—and the most unlucky—prospector who ever packed a burro; French Pete, and a hundred others—famous and infamous—had a part in the boom day era. And one other, whose name on the desert is synonymous with Ballarat—Chris Wicht—Ol' Chris, who ran the saloon, kept it open in fact long after the town itself had died.

For four years after the boom's collapse Chris "fed and drank" the stranded prospectors "because I couldn't help but feel I owed them something. They always left their dollars with me when they had 'em."

"I kept figuring the town would come back," he explains, "but when I'd gone

broke too and no rich strikes made I knew I'd finally have to fold up."

He doesn't think he was generous. "I had it. They needed it. They paid me when they could," is the way he puts it. Maybe that's why, whenever you mention Ballarat in a desert mining town, someone remembers Ol' Chris.

We were 200 miles away, having coffee at Big Rock springs on the edge of the Mojave, when we first heard about him. It was in October, 1940. We were on a hunt for ghost towns in the desert.

Mrs. Howard Bland, an attractive woman and an old-timer in the Mojave, told us about Ballarat and Chris as she served us coffee in the combination grocery store and lunch counter. There were interruptions while she waited on other customers, but we were in no hurry, and as time permitted she came and sat at the table with us and related her experiences in the old mining camp.

"I'll never forget Ballarat," she said, "any more than I will forget Chris Wicht and a certain postal inspector who paid the camp an official visit long after its gold had been worked out."

Ballarat's heyday was between 1895 to 1907. Then it was a bustling supply center for Panamint valley prospectors—a

link between the borax mines in Death Valley and the outside world.

It was 15 years later that Mrs. Bland first saw the old camp. Then it was just a cluster of buildings in a beautiful barren setting. There was a hotel that nobody used, a closed store, a postoffice where mail never came or went. Ol' Chris and his saloon were all that was left.

The government had found out that it had a postoffice that wasn't being used and a postal inspection must be made. The postmaster who had also been the grocer, had just drifted off after the others. The postal department sent an elderly dignified Bostonian, whose habits of living had made him hopelessly useless according to desert dwellers' way of thinking. The train dropped him at Randsburg, and since the bus driver was away, Mrs. Bland, whose husband was then the Randsburg grocer, was elected to take him to Ballarat in her Model T Ford.

"It was a cold, threatening day," she related. "The road over Slate range was just two deep ruts with a high ridge between. There were hairpin turns around cliffs that dropped 600 feet. Buzzards circling overhead.

"The postal inspector was nervous. All he could see were mountains of rock, a

few buzzards in the sky, and way below a wide barren flat. You could almost hear him shudder. I pointed out Ballarat — just a speck at the foot of the range on the other side of the valley. He didn't see how people and animals could live there. What, for instance, could those big birds find to eat?

"I tried to wither him with a look. 'Any old carcass is a feast to a buzzard,' I said, and that stopped all small talk till we got to Ballarat.

"It was late afternoon, but the sky was already dark because of the storm clouds. Chris Wicht came out and met us. I liked him right away. He helped us open the old store, and the inspector got out the combination to the safe and started to work. He was pretty sure of himself at first, but after about 10 tries he became a little upset. So was I. I didn't like the looks of that storm coming on.

" 'Why don't you give it a good cussing?' Ol' Chris suggested. 'That's the way the grocer used to make it work.' The inspector wouldn't even look at him. But he got up and handed me the figures. He said he guessed he didn't have the right touch.

"Well, I tried it six or seven times I guess—until I was ready to try a charge of dynamite if nothing else would work. Chris was still standing there with that funny little smile of his, so I said, 'How about you, Chris? Can you remember the words the grocer used?'

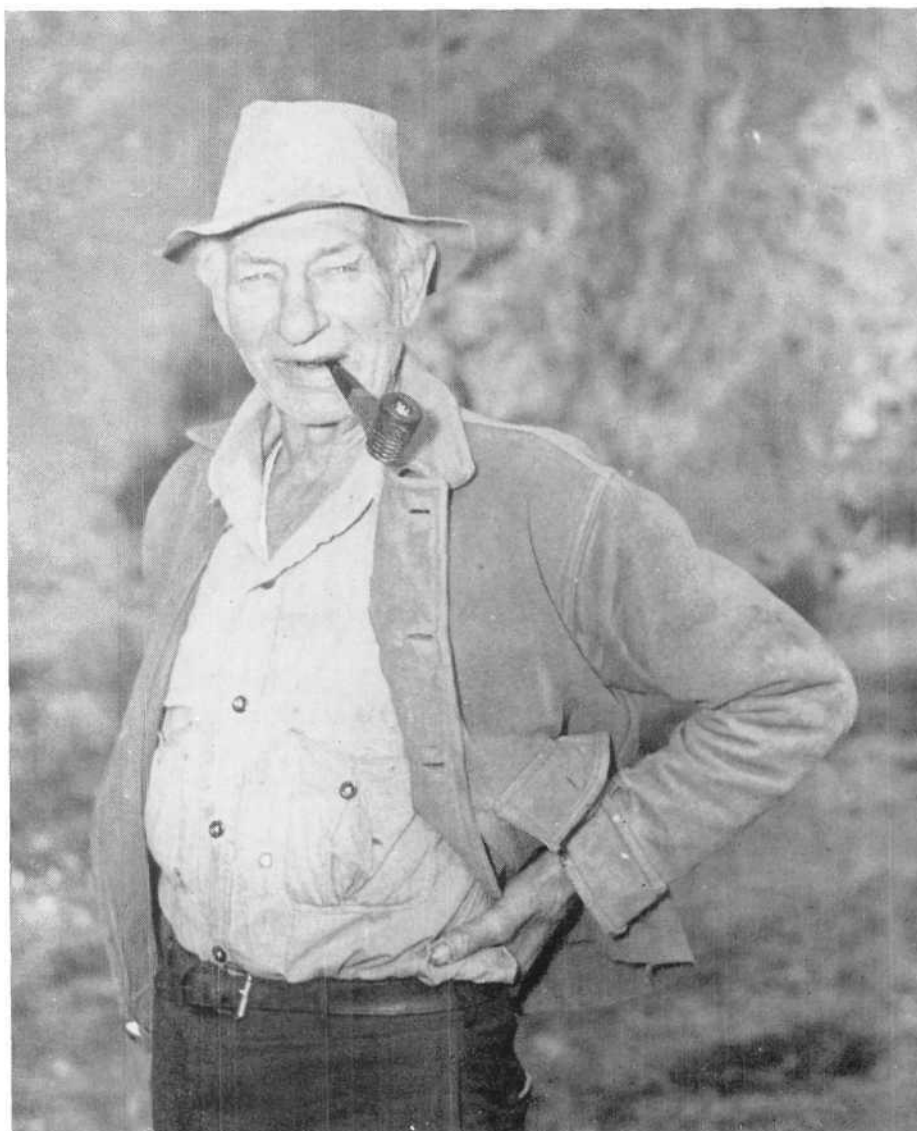
"Chris had never herded a burro, but he did all right. But even that didn't work this time.

"I was ready to start for home. But not the inspector. He took back his figures and started in all over again. Chris watched him awhile and shook his head. 'I think he needs a drink,' he said.

"I sat down and chewed my fingernails. Finally I couldn't stand it any longer. I asked him to look outside and see the storm coming up. And I told him about the water spout that hit Surprise canyon a couple of years before and cut a 20-foot gully where there used to be a road. I tried to make him understand that it doesn't just rain in this country—it pours. And that even a Model T didn't have a chance, and the road across the dry lake would be just as slippery as a gravy dish and we had 65 miles of rough desert road before we got back to Randsburg. I must have made an impression finally because he said he guessed we might as well go.

"I helped him into the Ford and we jogged out of town over the long washboard of road that crossed the valley. I couldn't tell whether the inspector's teeth or the Ford chattered loudest. I was holding the throttle open as far as was safe. But I needn't have bothered. The car stopped just before we got to the foot of the range. Ballarat was at least 10 miles behind us.

"I checked the gas, the plugs, even used



Chris Wicht went broke at Ballarat grubstaking the prospectors—and now he operates a neat little cabin resort in Surprise canyon.

my nail file on the points. It wasn't any use.

"The inspector seemed to have lost his voice, but he managed to whisper shakily, 'You don't suppose we'll be stranded here?'

" 'Unless you know more about the insides of this thing than I do, one of us will,' I assured him.

"He slipped down in the seat. 'I never drove a car in my life,' he said.

"I asked him how he was at walking. He just looked out into the darkness and shook his head. I wondered what the post office department was thinking of—sending a city man to Ballarat.

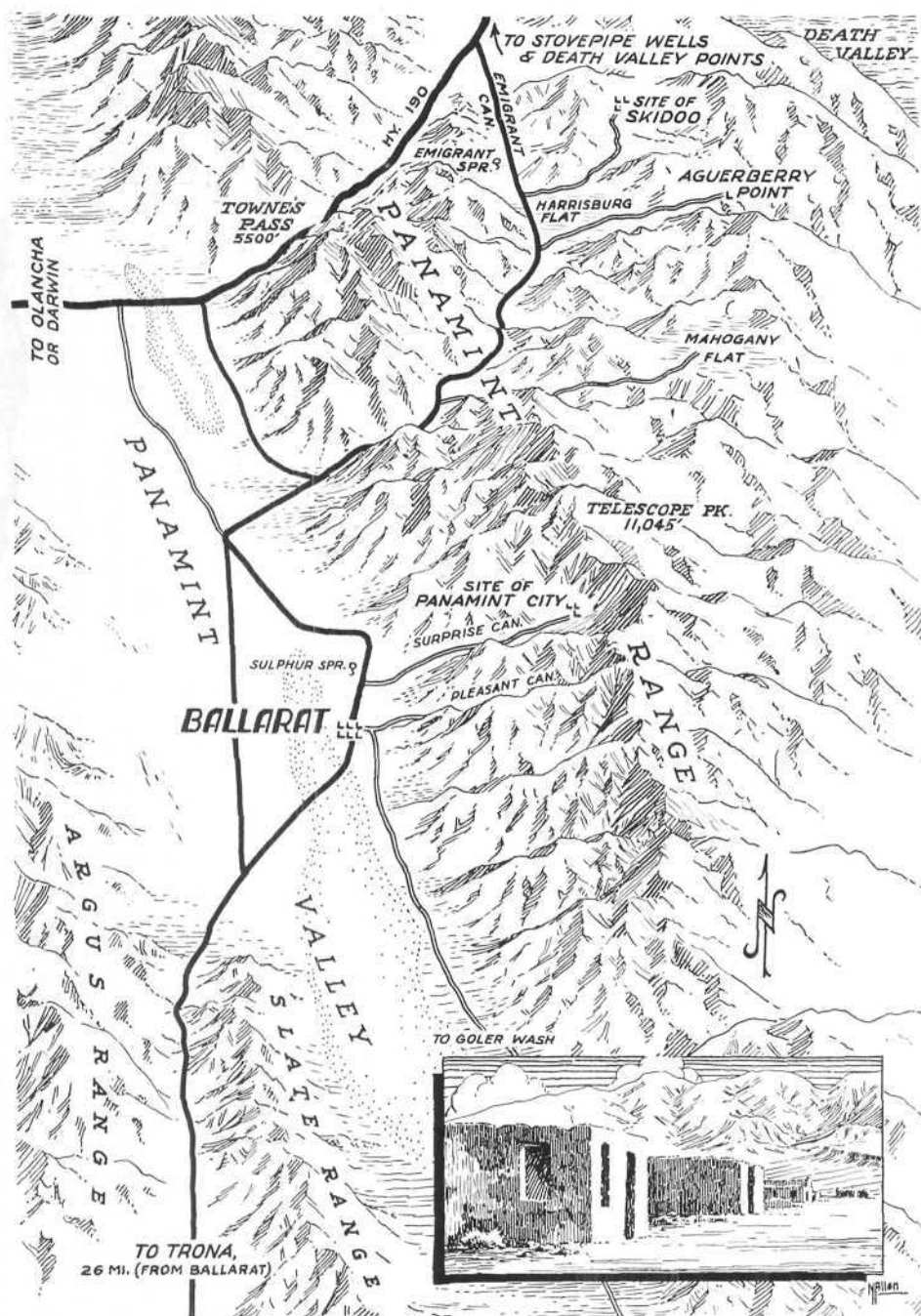
"There were two chocolate bars in the car pocket. I gave him both of them and warned him to stay put because of the jackals in the hills. When I left him he was shaking all over and all he could say was, 'Jackals!'

"Well, it was a rough hike, but Ol' Chris welcomed me at the end of it with a warm fire and a cozy chair. I suspect he

enjoyed the inspector's predicament. He said he'd get a burro out to him. He sent an old prospector and two burros. They returned hours later with a storm-washed inspector whose pince-nez dangled sadly on its chain.

"The next day a man from the Tanks on the other side of the range came over and fixed the Ford. The road had jolted loose all the ignition screws. I took the inspector back to Randsburg, and that was the last I ever saw of him. I don't believe he ever visited our desert again. Ol' Chris? They tell me he's still somewhere around Ballarat. Back up in the hills with his own claim. Look him up. He's one in a million."

After hearing her story we wouldn't have missed seeing Ballarat. Going over the Slate range we knew that except for grading, the road couldn't have been changed much. There were the same sheer cliffs, the same hairpin turns, even a buzzard circling overhead, with Ballarat a little group of patched up buildings at



the end of a ribbon of road across an alkaline flat.

Half a dozen men, a woman and her son, made their homes in the old structures and managed to find a living in the jagged forbidding range of the Panamints. Even the old double-boarded jail had become somebody's home. It didn't look as though it had ever been very strong.

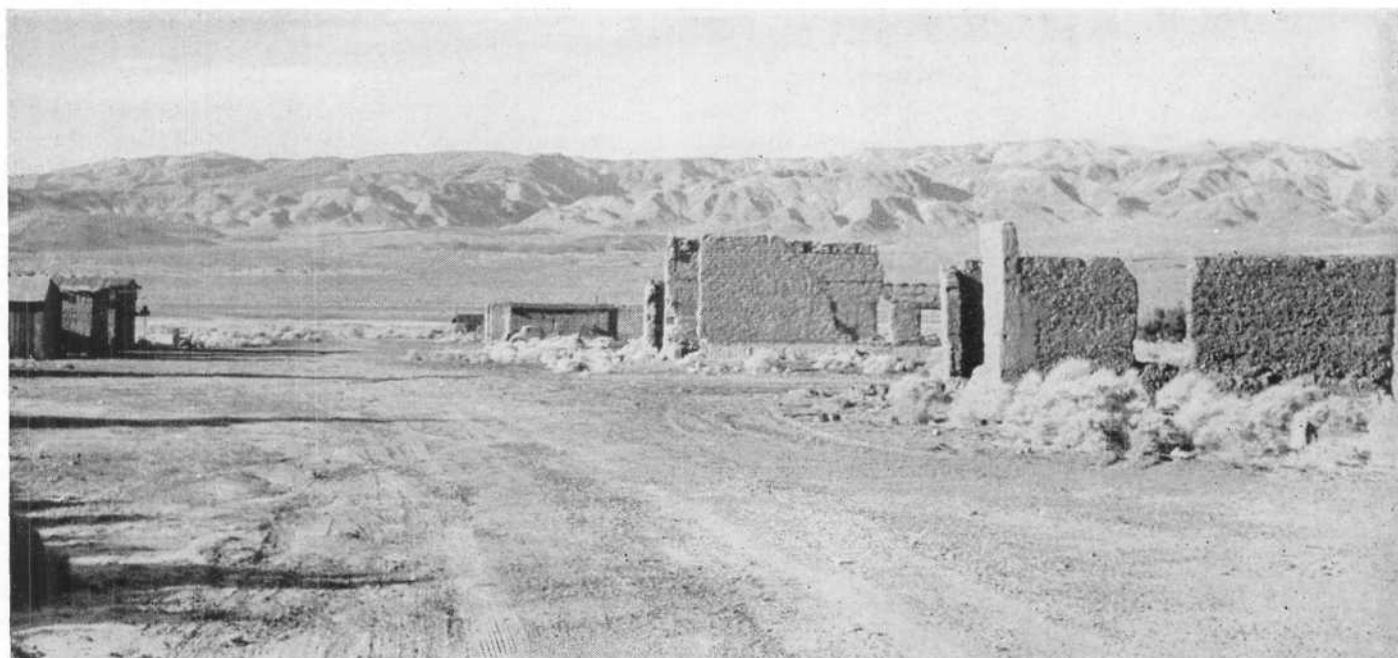
"Didn't have to be," said Billy Heider, one of the old-timers. "Nobody ever in it but drunks. Didn't even bother to lock the door on them. What was the use? Why should Ballarat feed 'em when all they needed was to sober up so's they could go back out and spend their own money again?"

"But weren't there bandits and outlaws in the early days? Wasn't it true that Panamint City had been founded by a couple of stage coach robbers who accidentally discovered the rich veins of silver there way back in '73—that one of them lived to a ripe old age in Ballarat?"

"Maybe so," he agreed. "You hear a lot of things. But we don't ask too many questions about a man out here—just so long as he's straight with us. Sure, we had our share of outlaws—every mining town does. Had our share of shootings too. But nobody ever got hurt. Generally just playing around, happy and blowing off steam."

Most of Ballarat's prospectors pull out when summer comes. The men all have cars of one sort or another, and the High Sierra isn't too far away. Some of them go up there and fish the summer away. Others have destinations unknown and never mentioned. Like Slim Ferge—Seldom Seen Slim. If the winter was lucky, he just disappears. When he's broke he comes back—goes into the Panamints for

Ballarat's heyday was between 1895 and 1907—and this is about all that is left of the old mining camp today.



a few ore samples—sets up beside the highway in the Mojave, sells the samples to tourists for a new stake and starts all over again.

Most of the prospectors are hunting for gold. The Panamints have low-grade silver, but mining it is not profitable according to Chris Wicht, who has a whole canyon of it and ought to know. Some of the newcomers have found scheelite, which is composed of calcium and tungsten oxides. Tungsten is an important factor in the manufacture of armaments, and with an eye to the future and war industries booming, they know the supply can never equal the demand. The essential part of their equipment is a violet ray lamp with batteries strapped to their chests. The light picks out the ore in little glowing patches.

But even the scheelite prospectors do not stay in Ballarat during the summer. The only one who is sure to be around is Ol' Chris Wicht. They told us where to find him—a group of cottonwoods halfway up Surprise canyon where he has a silver claim and a bunch of cabins—"runs a sort of resort."

That was news! A resort in Surprise canyon.

"How are the roads?" we asked.

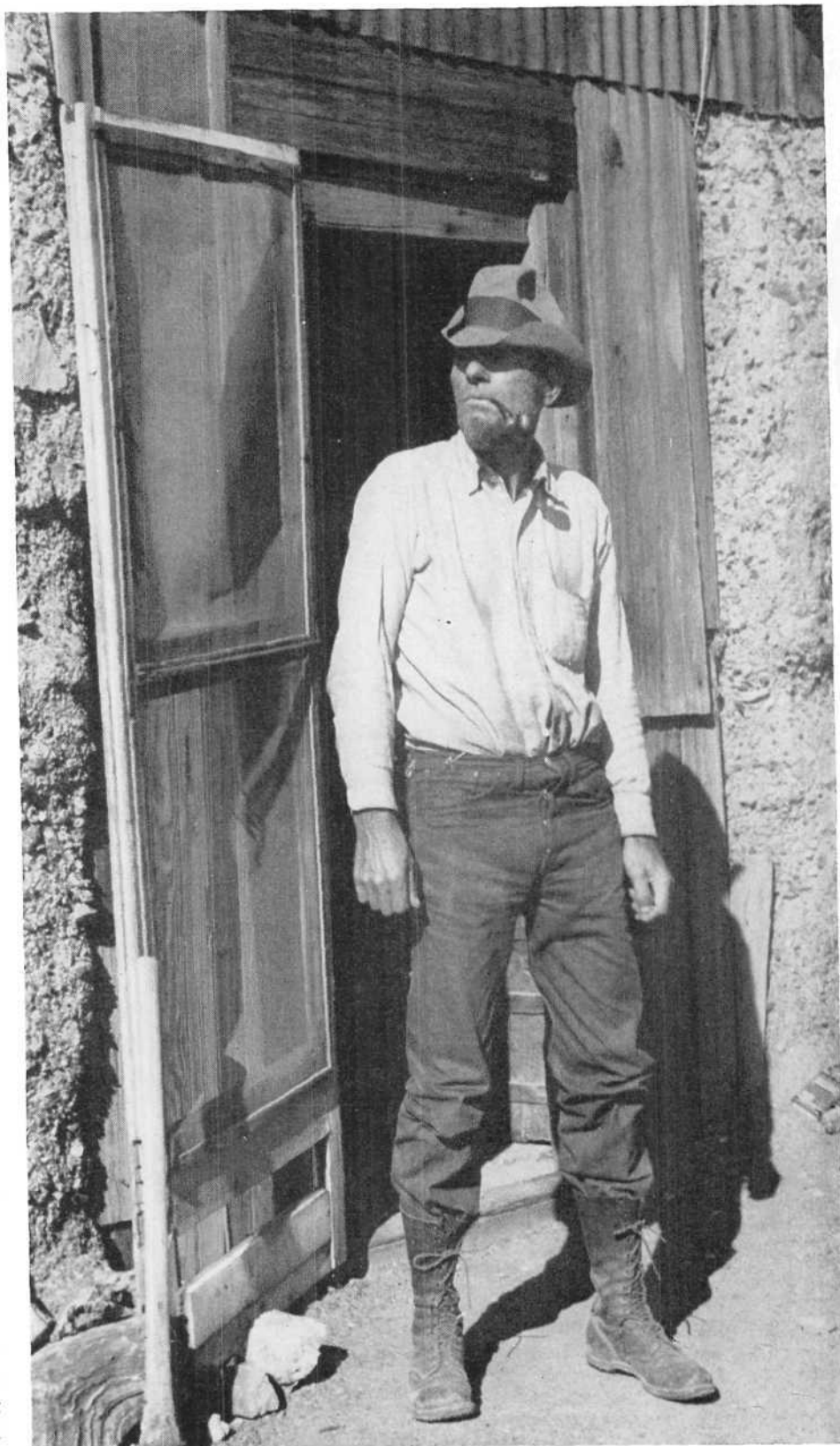
"Oh, fine," Slim assured us. "No bad roads around here. Don't find bad roads till you get down around Granite wells."

We didn't go down around Granite wells, but we decided, bumping along the road up Surprise canyon, that Seldom Seen Slim had a real sense of humor. We even wondered if it wouldn't be a nice idea to write Henry Ford a letter, providing there was anything left of our car to write about. But, at that, it might not have been so bad if we could have forgotten that the deep ravine beside the narrow ledge of road was where another road used to be and a waterspout took it out. Chris's place is a little paradise in the Panamints after you get to it.

He has a group of neat furnished cabins and running water the year round. He's even built a swimming pool where customers can "dehydrate" when the weather gets really hot and, for ultra modern convenience, he's put in his own electric light plant. Crude, maybe, but it works. He had to use what he could find—a water wheel from an old mine and an old Dodge generator.

Chris thinks there isn't any place like the Panamints. He doesn't work his claim much. "If it was gold," he says, "it would be all right. But by the time I've loaded silver onto the trucks, hauled it in and had it smelted, there isn't anything left."

He still has faith in Ballarat. "There's plenty of gold left yet in the Panamints.

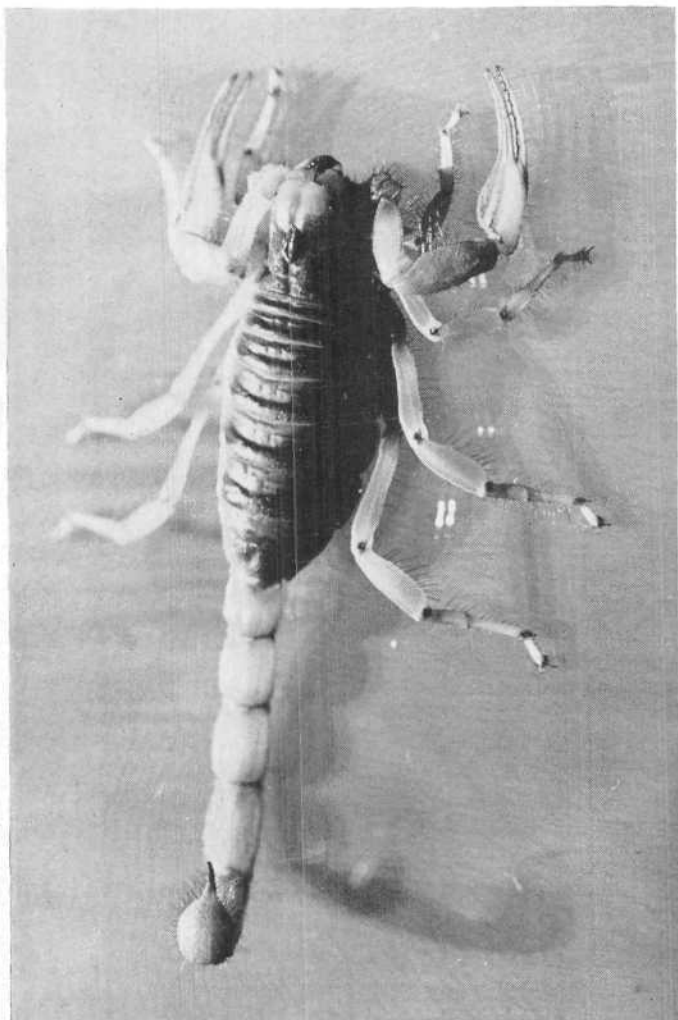


Seldom Seen Slim of Death Valley fame.

It runs in ledges in the mountains to the south, lots of good pockets if you can find them. Trouble is, you have to be like a mountain goat to get around. And these automobiles don't help any. In the old days, with a burro, a prospector could go almost anyplace. Now he either has to hunt around the edges, or leave the car

behind and walk. Besides, who ever got any satisfaction out of trying new words on automobiles?"

"Sure," he said, "I still think Ballarat will come back some day." He swept his arm broadly. "The reason may lay two hundred feet deep—but it's there, hid someplace in the Panamints."



Known to attain a length of five inches from end of nose to tip of tail, this giant Hairy Scorpion of the desert is greatly feared. However, its sting is no more dangerous than that of a bee. Note the hairs on the legs and on the bulbous poison sack which forms the base of the sting.

WHEN Herb Stahnke reached the Southside district hospital at Mesa, Arizona, in response to an urgent phone message, he found a typical group gathered in the receiving room—

A nurse holding a wailing baby; the father, a Mexican laborer, sitting on the edge of a chair crushing his hat in nervous fingers, a physician assembling equipment for administering scorpion antivenin, if needed.

As he entered and nodded greetings, Stahnke directed a keen glance at the crying child. Although evidently in considerable pain, it did not show nervousness—the aimless clawing at the lips, the pre-convulsion symptoms inevitably associated with serious cases of scorpion poisoning.

Stahnke turned from the child to question the father. How long since the child was stung? About half an hour. Where was the child when stung? Playing in the dirt by the wall of the adobe house. Did he kill the scorpion so that Stahnke could see the body to determine if it was one of the deadly species? No! He had just a glimpse of it, a big fellow, as it scurried away. All scorpions were the same, and he was interested in his baby, not in the scorpion.

Stahnke wanted to tell him that he would have better served the child by capturing the scorpion, but he refrained and turned his attention to the youngster again. Gently unclasping the sweaty fingers, he washed the little hand under a faucet and readily found the spot where the sting had pierced the skin. The tiny puncture was surrounded by a small white area which

When Herb Stahnke of Mesa, Arizona, learned that during a 9-year period 34 deaths in his state were attributed to scorpion stings, compared with only eight fatalities from rattlesnake bites, he decided to become better acquainted with this little Public Enemy No. 1 of the venom-ejecting group. He has studied and identified more than 6,000 live scorpions—and probably knows more about them than any other American scientist. Here is the story of the man—and some facts about scorpions that every person should know.

He Learned About Scorpions

By NATT N. DODGE

formed the center of a sizeable swelling beginning to turn bluish. Stahnke patted the sobbing child's shoulder and spoke encouragingly to the father.

"She'll be all right," he assured the man. "We'll give her a cube of ice to hold on the swelling, and in a couple of hours the pain will be gone. We'll keep her here awhile for observation. You can come for her about 8:30 this evening. Tomorrow she'll be as good as new."

As the door closed behind the father, Stahnke reviewed briefly the reasons for his conclusion that the child had not been stung by a scorpion of one of the deadly species. "First," he said, "the girl was playing in the dirt. Neither of the deadly Arizona species is commonly found around soil or adobes. Second, the father said it was 'a big fellow.' Both *sculpturatus* and *gertschi*, the deadly species, are relatively small scorpions. Third, and most important, the child's hand was swelled as if she'd been stung by a bumble bee, and the swelling is beginning to turn black-and-blue. There is no local swelling in connection with stings inflicted by the fatal species. Lastly, the youngster shows none of the general symptoms associated with scorpion-sting poisoning. Everything points to one of the relatively harmless varieties, probably *Hadrurus hirsutus*."

By this time you are wondering who this fellow is, this man who is called in on all scorpion-sting cases which come to the Southside district hospital in Mesa, and who so confidently sleuths out the identity of the villain, thereby assisting the physicians in their work.

Until a short time ago, Herb Stahnke was an obscure biology teacher at the Mesa union high school. Today he is considered the foremost authority on scorpions and scorpion-sting poisoning in the United States. He has already saved or helped to save more lives than he has any record of and as more and more hospitals and physicians are adopting his recommendations for treatment, desert dwellers are losing their deep-seated fear of desert scorpions, long the terror of mothers of small children and a deterrent to many would-be visitors to the Southwest. It all came about this way:

In 1935 when the Stahnke's little daughter Jo Anne was at the most susceptible age, scorpion poisoning was on the increase, and Mrs. Stahnke became greatly worried when she



Dr. Herbert Stahnke in his study where more than 6,000 live scorpions have been identified.

found a number of the vicious looking things around their home premises.

When she sought information about the seriousness of scorpion stings, the answers were conflicting. Some said they were no more serious than bee stings, others that a small child stung by a scorpion invariably died.

Inquiry among physicians revealed that little was known either about scorpions or the effects of their poison. It was stated, however that several deaths attributable to scorpion stings had occurred in Mesa and vicinity in recent years. Mr. Stahnke's fear for the welfare of his small daughter was aroused and he sought Arizona medical records.

He found that during a nine-year period 50 deaths had resulted from the bites or stings of poisonous creatures. Of these 50 deaths, 34 were from scorpion stings, eight from rattlesnake bites, three from black-widow spiders, one from Gila monster, and four classed as miscellaneous.

During the summer of 1935, Stahnke attended summer school at Iowa state college in Ames. One noon he picked up a copy of his hometown newspaper, the Mesa Journal-Tribune, and was horrified to read of the tragic death of little Bobby Collingwood, four and one-half years old, from the sting of a scorpion. Visualizing his own child as a possible victim, he resolved that upon his return to Mesa in the fall he would immediately start vigorous action to solve his state's problem of scorpionism.

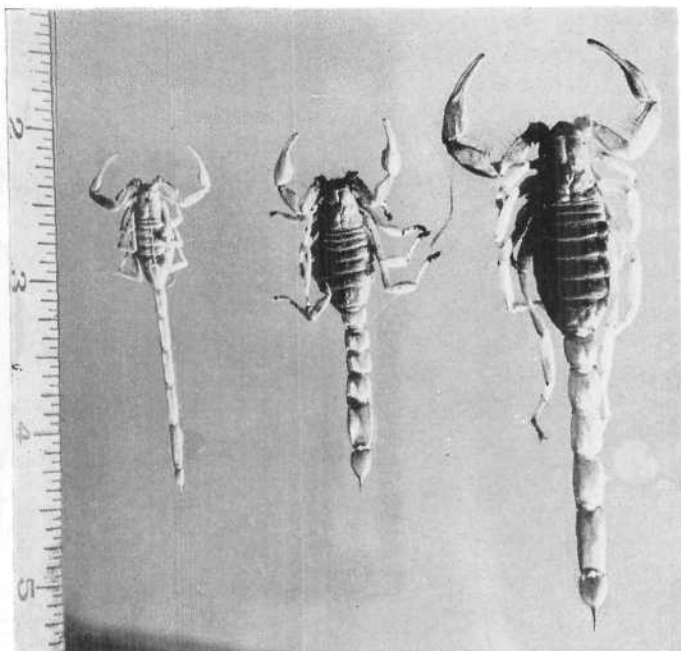
So perturbed was he over the situation that he wrote to the

publisher of the Mesa Journal-Tribune, stated his plan to find a means of removing this menace to desert children, and asked the newspaper to cooperate by securing live scorpions from the vicinity of Mesa so that he would have material upon which to start work immediately upon his return.

Realizing the importance of Stahnke's self-imposed project, the editor of the Journal-Tribune published a request that live scorpions, properly caged in jars, be brought to the office of the newspaper. No sooner had the matter been made public than the manager of the Rendezvous swimming pool of Mesa offered, as an incentive, a free swim to each boy or girl who checked in a live scorpion at the newspaper office. So effective was the scorpion gathering campaign that when Stahnke returned to Mesa early in September, more than 600 live scorpions were waiting for him at the Journal-Tribune office.

Stahnke's first step was to look up all of the available literature on scorpions. He found that very little work regarding the venom of scorpions of the United States had ever been done. It appeared that if little Jo Anne Stahnke were to be made safe from scorpion poisoning her dad was going to have to start from scratch, and that is just what Herb Stahnke did.

In spare time the science teacher began an exhaustive study of the 600 live specimens which the people of Mesa had collected for him. He wanted to identify them. He obtained from the American Museum of Natural History in New York City its collection of Arizona scorpions so that he might compare them with his. Gradually as he became acquainted with the



All scorpions are not alike as is shown by this photo. At the left is one of Arizona's two deadly species, *Centruroides sculpturatus*. It may be recognized by its long, slender tail, delicate pincers, and generally streamlined appearance. In the center is *Vejovis spinigerus*, a relatively common but not deadly species. Note how chunky it is as compared with *sculpturatus*. On the right is *Hadrurus hirsutus*, the big Desert Scorpion, whose sting is painful but not fatal.

different varieties, he was able to recognize several named species, and as time passed he described and named several others which had not been recorded by science.

As soon as each species was definitely identified, Stahnke tested the effects of its poison on white rats. Rats were selected because their reaction to poison is similar to that of human beings. Guinea pigs and rabbits are too sensitive. It became necessary for Stahnke to start a small white rat "farm" in order to secure enough subjects for poison tests. Having insufficient space at his residence, Stahnke prevailed upon school officials to let him use a corner of the biology laboratory at the high school, and it was soon taken up with cages of white rats. These required feed, water, and daily care—all to be given outside of school hours.

For a time it seemed to Stahnke that he wasn't getting anywhere. His days became a blur of activity. Classes must be taught, home duties completed, the rats and scorpions tended, and the few precious hours available each evening devoted to tests of the poison of additional scorpions on white rats and the recording of the results. From time to time the editor of the Journal-Tribune published articles on the progress of Stahnke's project, and soon live scorpions began to come in from interested persons in more distant parts of the Southwest. Many of these were the same as the species found around Mesa; others were different. Gradually as Stahnke learned to recognize them all, less time was required for identifications, more and more available for testing on rats the poison of the different species. Eventually he knew exactly how rats would react to the poison of each.

Of all of the species of scorpions found in Arizona, the poison of only two was fatal to white rats. Stings of the others were painful, but the effect was local and the rats recovered. Now he was getting somewhere! He was ready at last for that all important phase of his work; could he prevent the death of rats which had been stung by scorpions of the fatal species?

Scientists in Great Britain, South America, and Mexico had

FIRST AID FOR SCORPION STINGS

Experience has proven that if a person who has been stung by one of the deadly species of scorpions will immediately apply ice at the place where the sting has entered the flesh, absorption of the poison by the body may be retarded to a degree that a natural antivenin is built up by the body to counteract it.

The most effective way to apply ice is to make ice water and immediately immerse the part stung. It should be withdrawn for one minute, immersed for about two minutes, withdrawn for one minute, then immersed for two minutes. This should be continued, the water being kept cold by the addition of ice, until the poison has been dissipated. This may take from one to two hours.

Should the victim show signs of great nervousness, Dr. Stahnke advises that he be rushed to a physician or hospital where scorpion antivenin is available. It has been his experience, however, that if the ice treatment is properly carried out, it will in itself enable the human body to counteract the effect of the poison, and the antivenin injections will not be necessary.

But if a person is stung on the back of the neck or thereabouts, ice should be applied at once and the serum given as soon as possible. This is due to the concentration of nerves near the surface in that portion of the body, these nerves rapidly conducting the poison to the vital centers.

made exhaustive studies of scorpion poisoning and had developed antivenins to counteract the effects of the poisons of their local species.

After numerous tests Stahnke found that antivenin for British and Southern American scorpion poison was ineffective for Arizona stings. His one remaining hope was that Mexican serum would solve his problem, and materials were ordered from Mexico City for the tests.

Then came the trial. Two rats were tied down and a scorpion of one of Arizona's deadly species induced to sting each of them on the tender flesh of a hind foot. One of the rats was given a hypodermic injection of the Mexican antivenin. Actions of both were observed closely. One of the rats developed all of the now-familiar symptoms of scorpion poisoning and died. The other, that had been given the serum, showed only mild symptoms and soon recovered. Again and again the test was made. The inoculated rat invariably recovered while the one not given the treatment succumbed. Further tests were made, more and more time being allowed to elapse between the time of the sting and the injection of the serum until Stahnke knew just how long treatment could be delayed and the rat still live. Another milestone had been reached in the study of desert scorpions.

Unless Stahnke could prove however that the results of his experience on rats could be duplicated with human beings, all of his work would be in vain. Without a license to practice medicine, he was barred from personally inoculating a human patient. Because he was not a physician, Stahnke found that his work was regarded skeptically by the medical profession. Nevertheless he kept the local physicians informed of the progress of his experiments with scorpion-poisoned rats and saw to it that a supply of the Mexican serum was on hand at the Mesa Southside district hospital for any physician who might have occasion to use it.

Finally his chance came! A small child that had been stung several times by a scorpion was brought to the hospital in an advanced stage of scorpionism. The physician, realizing that

he was unable to save him, determined to try the antivenin. An emergency inoculation was made. The result was astounding. Immediate relief was achieved, and the child recovered.

From that moment, Stahnke's work was recognized by the medical men of Mesa. He received the courtesy of the hospital, to be called whenever a scorpion sting case is brought in. Mesa, as well as several other towns of the Salt river valley, now keeps scorpion serum on hand. Stahnke's intimate knowledge of the effects of scorpion poisoning has been of the utmost value to physicians, and the opportunities provided by their cooperation have enabled him to compare the effects of the poison and the serum, as shown by white rats, with those of human victims.

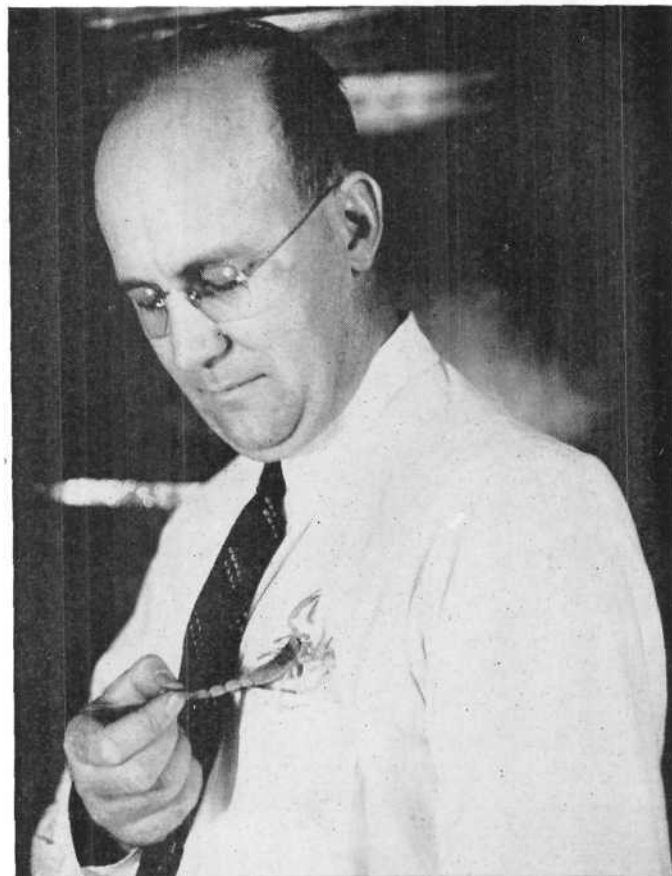
Every summer after that vital one of 1935 through 1939, Herb Stahnke and his family went back to Ames, Iowa, where he was enrolled in the graduate school of Iowa state college. With the aid of the splendid library facilities of that institution, he was able to acquaint himself with the published reports of the scorpion research throughout the world. The excellently equipped laboratories enabled him to refine his experimental techniques and procedures. These studies together with the mass of data collected in his several years work with scorpions and in testing their poisons on white rats enabled him to complete his thesis on "The Scorpions of Arizona" in the summer of 1939 and to receive the degree of Doctor of Philosophy.

But if Dr. Stahnke had wished to culminate his scorpion research with the attainment of a degree, he would not have been permitted to do so without a struggle. So many persons have become interested in his work that an ever increasing volume of live scorpions continues to arrive at his laboratory. Friends, acquaintances, physicians, teachers, students, rangers at isolated national monuments, and others totaling more than 300 persons in many states, continue to send in specimens. Over 6,000 scorpions have been received and examined by Stahnke since 1935, and during the summer of 1940 alone he received more than 1,000 live specimens. Practically all of those coming in are of species now identified, but frequently species hitherto unknown in certain localities arrive, thus widening the known range. And then, occasionally, the unexpected occurs and a new species turns up as in the case of an entirely unknown form being found in the city dump in Mesa. If any locality in Arizona has been gone over with a fine-tooth comb for scorpions, it is Mesa, and yet up pops a previously undiscovered species.

"Don't be afraid of scorpions," Dr. Stahnke advises, "but have a healthy respect for all of them. Fear is unreasoning, hence dangerous. Learn to recognize the two deadly species. Be sure that you know exactly what to do in case you or someone else is stung. Remember, if *no* swelling develops about the point where the sting has entered the flesh, you have probably been stung by one of the deadly species. If swelling *does* follow the sting, you have no cause for alarm. However, to be on the safe side, apply ice immediately in any case."

Dr. Stahnke finds the ice treatment a very effective first-aid measure for black-widow spider bite also.

Of the 21 species of scorpions found to date in Arizona, only two have proven deadly. These are middle-sized forms known to scientists as *Centruroides sculpturatus* Ewing and *Centruroides gertschi* Stahnke. (The latter, as indicated, was first described and named by Stahnke, and is one of 16 species which, to date, have been discovered by Dr. Stahnke.) It isn't the big scorpion which is dangerous. The big fellow of Arizona, *Hadrurus hirsutus* Wood, may measure as much as five inches from its blunt nose to the end of its sting-tipped tail. The smallest species in the state attains a length of about one inch. Thus far the two deadly species have been found only in the southern part of the state, *sculpturatus* being recorded from Tucson throughout the Casa Grande and Salt river valleys as far west as Yuma, north to Wickenburg, with Miami and Globe its eastern limit. *Gertschi* is common in the southeastern corner of the state overlapping the range of *sculpturatus* throughout its western range extremities. Whether *sculpturatus*



Dr. Stahnke knows how to handle scorpions so that he will not get stung. However, he does his showing off with relatively harmless species. Here he holds the big Desert Scorpion, *Hadrurus hirsutus*, against his shirt so that it will show up plainly for the camera.

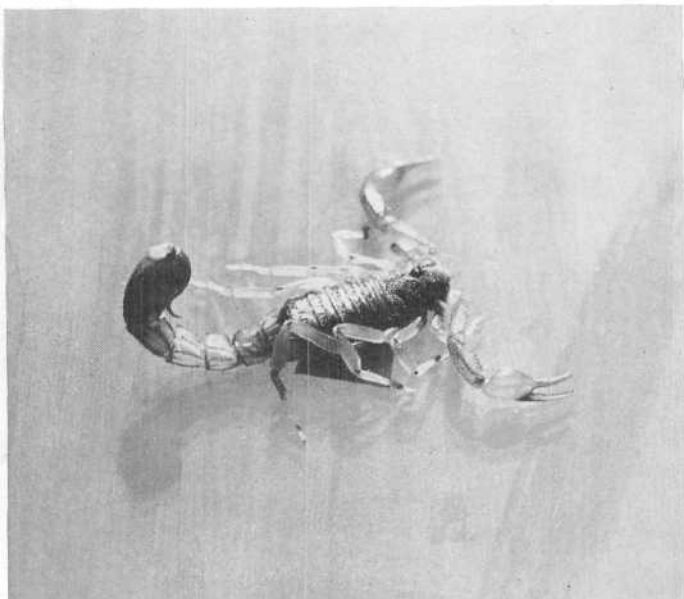
occurs west of the Colorado river in Southern California is not known, Dr. Stahnke not having received specimens from that area.

Scorpions do not bite, as many people think; they sting. The sting and its poison sack or reservoir are at the extreme tip of the segments of the tail. Pincers at the head end of the body are used by the scorpion for holding its prey which consists of soft-bodied insects and spiders. Young scorpions do *not* eat the body of the mother. This is a popular superstition without basis in fact.

Scorpions are nocturnal; that is, they come out at night in search of food, hiding in the daytime in cracks or crevices, under boards and the loose bark on trees or stumps, and similar dark, tight places. Sometimes they get inside houses and, when daylight comes, crawl into shoes or the folds of clothing hanging in closets. It is always advisable to shake out your shoes before putting them on in the morning, and to throw back the sheet before getting into bed at night, Dr. Stahnke advises.

As head of the biology department of the Mesa union high school, Dr. Stahnke is busier than ever this winter with his teaching, but considers his past accomplishments as stepping stones for greater ones in the future. Recently he announced his intention of enlarging his field of effort to include a study of the scorpions of the entire United States, and he has issued a request that persons send in specimens with data regarding the location, surroundings, and conditions of capture from anywhere in this country. He is also at work on a project to find a chemical antidote for scorpionism to replace the serum. All sera have certain drawbacks which make their use difficult; then too, it takes time to get fresh supplies all the way from Mexico City.

Stahnke's recently acquired Ph. D. degree seems to have af-



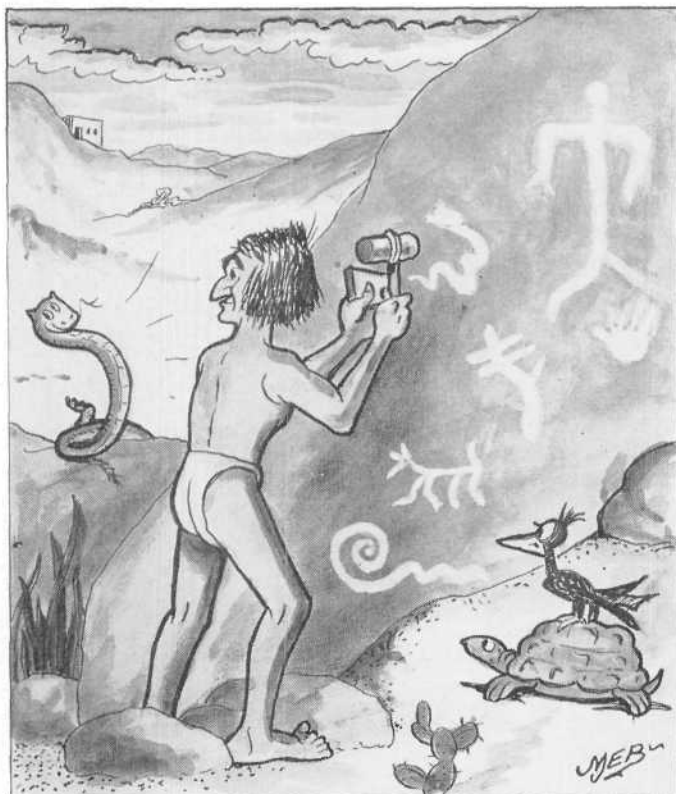
*Ready to do battle. This fellow, known as *Vejovis spinigerus* or Striped-tail Scorpion, is poised to strike. The tail with its needle-pointed sting is flexed and ready to flash forward with lightning speed.*

fectured him not at all but, he admits, gives him the advantage of being introduced as *Doctor Stahnke* to audiences, some of which, in the past, gave him the impression that they felt that a man with only *mister* in front of his name had no business knowing anything about scorpions anyway.

If, in the past five years, Dr. Stahnke has become the best informed scorpion specialist in the United States; if he has made all Arizona scorpion conscious and brought to the attention of

SIDEWINDER SAM

By M. E. Brady



"Sam's all swelled up since he got a job posing for that artist."

many physicians and several hospitals the benefits derived from the use of scorpion antivenin; if he has directly or indirectly, saved a number of children from a painful death and their parents from lifelong heartache; if he has started on the way to familiarizing all of the United States with scorpions, their poison, and its treatment, it is only because, as a father, he wanted to learn something about scorpions so that he would know what to do in case his little daughter should have the misfortune to be stung by one.

The strange part of the whole affair is that even with all the scorpions he keeps in his study, neither of his children has been stung—yet.

Books of the Southwest

Your travel in the desert area will be many times more enjoyable if you know something of the places, the people past and present, and the lore of this mystic region. Here is a select list of books that should be in every library:

REMINISCENCES OF A RANGER. Major Horace Bell. Intimate recollections of early Southern California by a member of the Los Angeles Rangers. Stirring events from 1850 to 1880 written in a picturesque, lively style. Index, illus., 485 pp. **\$2.00**

AND IF MAN TRIUMPH. George Snell. Dramatic tale based on Lewis Manly's journal recording trek of the Death Valley party of '49, from Salt Lake City to Los Angeles. Descriptive detail; written in first person from viewpoint of Manly. Illus., 215 pp. **\$2.50**

DESERT WILD FLOWERS. Edmund C. Jaeger. Most complete book yet published on desert flora. Almost 800 species described and illustrated by line drawings or photos. Includes material on discovery and naming of plants, bird and other animal associations, Indian and pioneer uses, explanation of botanical names. 322 pp. **\$3.50**

THE DESERT. John C. Van Dyke. New edition of a classic which has never been equaled for description of the mystery and color of the desert. Seen through the eyes of an artist, a nature lover and science student, the deserts of Southern California, Arizona and Sonora become clothed with a magic form. 257 pp. **\$3.00**

GOLDEN MIRAGES. Philip A. Bailey. Tales and legends of lost mines in the southwest desert. Contains many other yarns about the old prospectors who used to roam the desert. Illus., 353 pp. **\$3.00**

CALIFORNIA DESERTS. Edmund C. Jaeger. Complete information on Colorado and Mojave deserts. Plant and animal life, geography, chapter on aboriginal Indians. Drawings, photos, end-maps. 209 pp. **\$2.00**

DEATH VALLEY, A Guide. Complete and beautifully illustrated publication of the Federal Writers Project. Geology, plant and animal life, history, followed by series of 20 tours with detailed information for travelers. Biblio., index, map, paper bound, **\$1.00**, cloth **\$1.75**

GRAND CANYON COUNTRY. M. R. Tillotson and Frank J. Taylor. Accurate handbook of information covering geology, wildlife, history and recreation. 108 pp. **\$1.00**

All books mailed postpaid.

Add 3% sales tax in California.

DESERT CRAFTS SHOP

El Centro, California

John Hilton went out on his monthly scouting trip for Desert Magazine readers and located an interesting new field of "desert roses." Also, he nearly had an exciting encounter with a prehistoric ground sloth, but—well, you'll have to read this story. It is one of Hilton's best.

'Desert Roses' in Arizona

By JOHN W. HILTON
Photographs by Harlow Jones

*I*N a previous issue of Desert Magazine I wrote about those strange rose-shaped forms of chalcedony which occur in many places in the Southwest—chalcedony roses they are commonly called.

I mentioned a number of localities where they are found, and suggested that readers of the magazine tell me of other fields where such specimens could be gathered.

There was a widespread response to my request. I am still getting mail on the subject, and my list of "desert rose" fields would make an imposing map. It would include nearly every desert county in three states.

While I have not had the time to visit all these places, some of the letters have led me into areas of unusual interest, not alone for their chalcedony but for other minerals which often occur in the same locality.

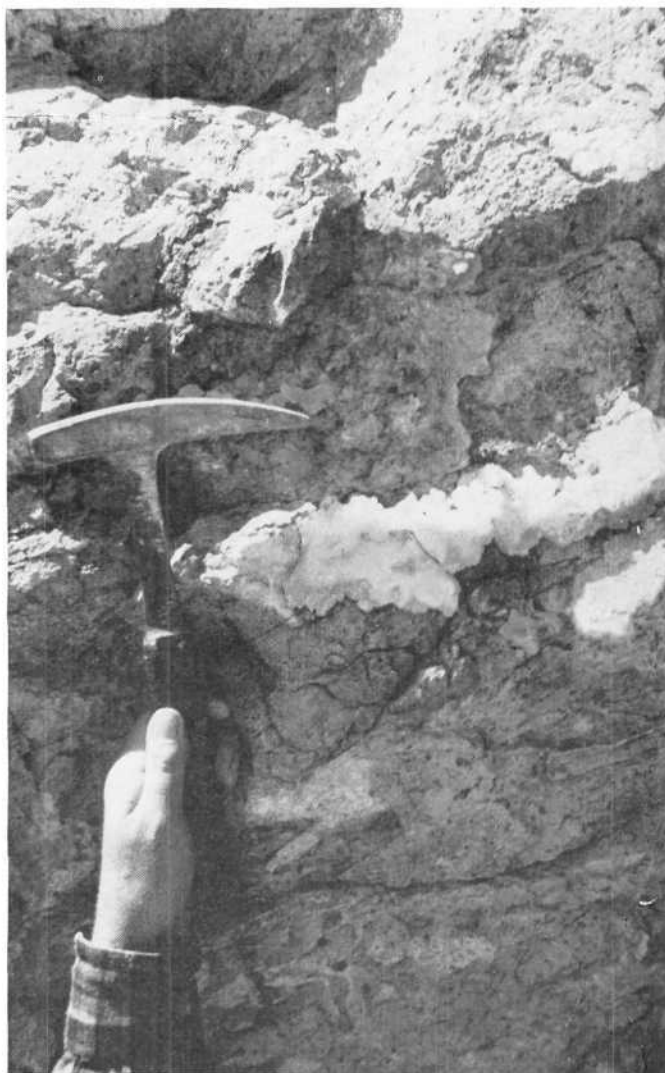
One of these fields is Picture Rock canyon in Arizona. I have not been able to find this name on any official map, so I am merely designating it by the name generally used by residents of that region. In my opinion that is a good rule for map-makers to follow. There would be less confusion if commonly accepted place names were given official sanction.

Picture Rock is an accurate descriptive name for this canyon. On some of its sidewalls are many of the finest Indian petroglyphs I have ever seen.

The folks who run the little trading post at Olburg, Arizona guided me to the spot. My companions were Max Felker and Ed. Matteson, gem rock enthusiasts, and Harlow Jones, photographer. We left the main highway and followed a good dirt road toward the canyon where the trading post owners told us they had seen some "pretty white rocks." Off to our right, almost hidden by a forest of Saguaro cacti, we could see some of the houses of the Pima Indians whose reservation we were crossing.

As we neared the hills the giant cacti became larger and more abundant. On one of them we saw a fine crest. These crested Saguaro are rare indeed and scientists who are interested in this form of growth have catalogued all they have found in Arizona.

No one knows for sure why a normal cactus suddenly begins throwing out this strange crest-like growth at the top. It is evi-



Members of the Hilton party found the chalcedony weathering out of seams in the face of the cliff.

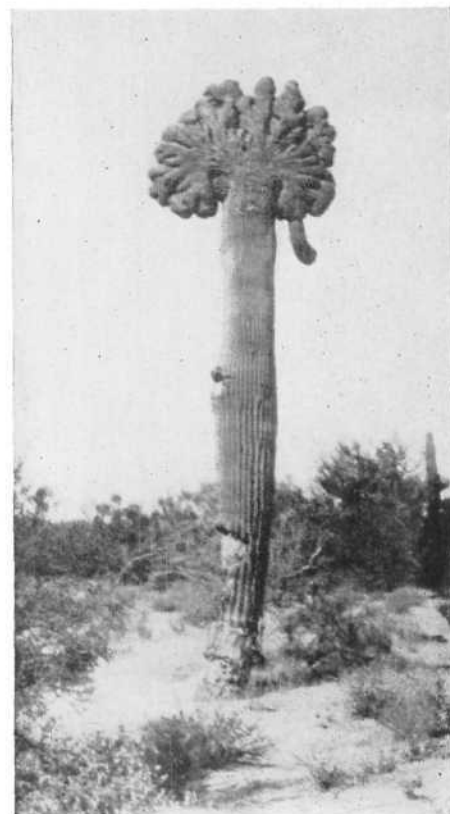
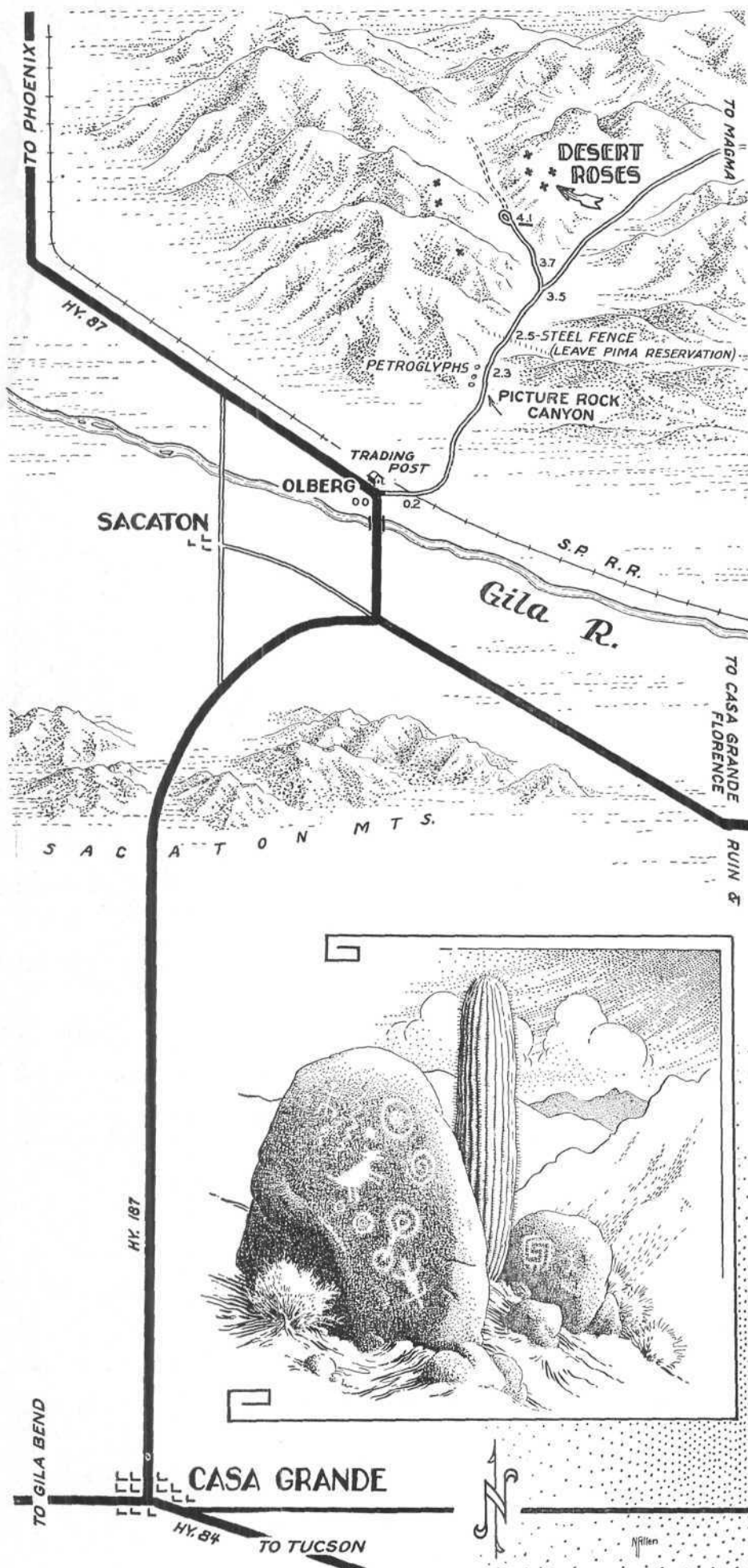
dent there is some disturbance of the cell structure, but laboratory study of the "fan" has failed to disclose any evidence of disease or cancer. The fact remains that they are exceedingly rare among the Saguaro—and the chance of finding such a crest is about one in a million.

As we entered the mouth of the canyon we saw what appeared to be crests on several of the barrel cacti, but on closer inspection these odd-shaped tops proved to be "monstrose forms." Here again the cell structure is disturbed, but the abnormal growth takes a less graceful form than in the true crest. The tops of these barrel cacti resembled huge thorny cauliflower heads. In many instances they had dozens of growth centers at the tip of the plant. According to some authorities this is a distinct species found only in certain isolated sections of Arizona.

Soon after we entered the canyon we noted Indian writings on the rocks on both sides of the road. Some of the boulders were covered with them and in several instances the glyphs of one period seemed to be imposed on those of an earlier culture.

Frank Midwall who first brought this canyon to my attention tells me that the symbols incised in the rocks range from the period of nomadic tribesmen down to the pueblo age. The fact that some of the obviously newer glyphs show the figures of horses would indicate that the Pimas were still carving the boulders after the advent of the white man.

I am happy to report, however, that none of the Arizona



One of the rare crested Saguaro described by John Hilton in this story.

tribesmen has reached that advanced stage in civilization when they clutter up the rocks with such modernistic phrases as "Joe loves Maria" after the fashion of some of our California "Indians."

Anyone interested in photographing Indian petroglyphs will find this spot a happy hunting ground. There seems to be no end of variety, and they appear over a considerable area. It should be remembered that these petroglyphs are on the Pima Indian reservation and are protected by both federal and state laws. To tamper with them is a serious offense—and I am sure *Desert Magazine* readers would not do it anyway.

There is sufficient contrast between these incisions and the rocks on which they occur to make it unnecessary to chalk or paint them for photographic purposes. It is my private opinion that photographers are prone to overdo their chalking in most instances, filling in lines that do not exist, and creating something unnatural and untrue. Excessive chalking is always the handiwork of a novice—and when the pictures are reproduced in print they become a glowing testimonial to the handiwork of a dumb tenderfoot.

With a red filter and the proper film it is possible to make sharp clear pictures of these petroglyphs in most instances without tampering with them—and they are then left in their natural state for other visitors to enjoy. Color photography is a still better way to record them as koda-

chrome often brings out things not seen by the eye.

This canyon road evidently follows the old Indian trail through a natural pass in the hills. As we continued the hills on both sides began to recede and we were soon in a small valley where the trail forked. We took the left route and were soon in a veritable cactus garden. Besides the Saguaro and barrel cactus already mentioned, we saw three species of opuntia, two of echinocereus and an abundance of little fishhooked *Neomammillaria grabamii* with its bright red berries. Most of these plants will be in blossom about the time this story comes out in print—and that is an added reason for a trip to this scenic area. Heavy rains all over the desert this season have insured an abundant display of annual desert wildflowers.

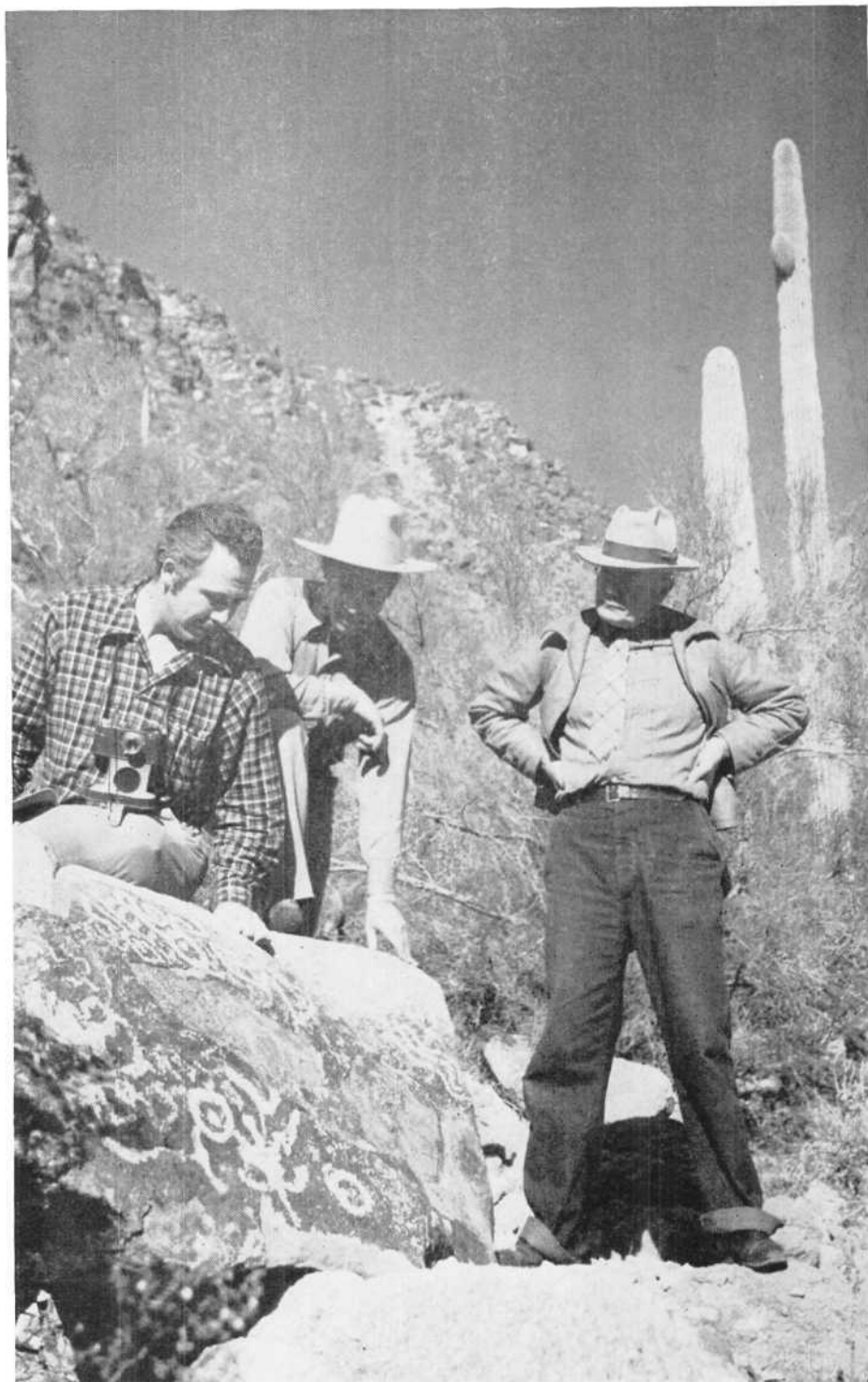
As we continued, the valley narrowed and we were soon flanked on each side by flat-topped buttes with long alluvial fans spreading like old-fashioned skirts to the desert floor. We were aiming for the small detached butte on the right and presently arrived at its base.

As soon as I stepped out of the car I saw pieces of water-worn chalcedony in the wash, and the alluvial fan on our right was sprinkled with pretty specimens. Some of the smaller pieces looked for all the world like the fancy buttons being worn today on ladies' clothing, and gave me the idea that if they were cleaned up and drilled they would give the mother or sister in some rockhound's family an original and becoming novelty. I have since made clips and brooches from several of the specimens I picked up at random that day, and find them just as attractive and more interesting than most of the cut and polished gems in my display.

Near the top of the hill the alluvial slope ended abruptly against the cliff and there we could see the source of all those lovely bits of chalcedony that were scattered so generously below. The desert roses are weathering out of seams in this cliff and in some places form lacy patches of interlocking rosettes and other fantastic patterns several inches in diameter. Most of the large pieces break apart when they finally fall from the cliffs and so we tried to reach a point where we could collect some of them in place. After several attempts we decided to leave them for Sierra club members or others of the rock-climbing fraternity who carry ropes and pitons.

Farther around the base of the cliff we found large blocks of material that had recently fallen from the seams, and in these were many fine desert roses.

As we continued skirting the base of the cliff we kept encountering the rather fresh tracks of some animal. Since the soil was soft and the slope rather steep the tracks were merely indistinct holes. We all offered suggestions that ranged from mountain lion to a giant ground sloth that had some-



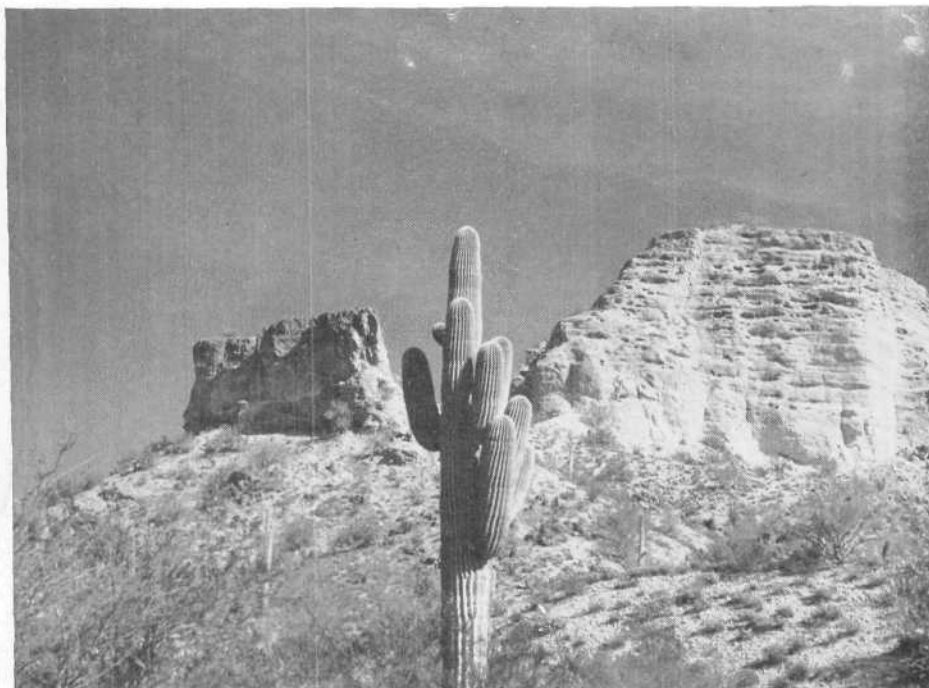
Hilton, Max Felker and Ed. Matteson stop to examine the ancient petroglyphs found along both sides of Picture Rock canyon.

how survived through the ages. We were still joking about our ground sloth when we came to a scene that caused us all to stop abruptly.

Just ahead of us was a patch of earth newly trampled and gouged, as if a conflict had taken place here. Scattered about were the spines and rib sections of a freshly dismembered barrel cactus. Immediately we all became desert detectives and cast about for further clues to the identity of an animal which would deliberately tear a barrel cactus apart and eat the inside. Our first thought was that it might be a

thirsty Indian or prospector who had taken some of the pulp for its high water content. Then we found the woody core and roots of the plant lying down the slope and plainly evident were the huge tooth marks of the creature that had been gnawing at the plant.

We stopped our kidding and began to wonder. The museum at Boulder City has ample proof that the sloth did include cactus in his diet. Was it possible that some of these animals actually were living—perhaps hiding during the daylight hours in the caves that were to be seen



On the left is the butte where "desert roses" were found in place. Many specimens were picked up on the alluvial fan at the base of the walls.

over across on the other side of our canyon?

Our interest in gem rocks vanished for the moment—there was bigger game to be sought. After all, science must be served and it became our duty to track this cactus-devouring beast to its lair regardless of personal risk.

It was with both curiosity and misgivings that we rounded each new turn of the cliff wall—but no lumbering shaggy red-haired beast appeared.

Finally our trail of freshly disturbed earth led us through a break in the cliff and out on top where for the first time we could see a well-defined print of the animal we were following in the interest of science and posterity.

Then we found the answer—and we felt rather foolish as we gathered around the now perfect tracks of an animal that could have been none other than a burro—the only animal of the desert, past or present, that had been left out of our list of conjectures.

I am still somewhat mystified to know why a burro should go to all the trouble of pawing down a barrel cactus, tearing it up with his hoofs and gnawing through and among those vicious thorns for the privilege of eating the rather insipid pulp of a bisnaga. Especially when the desert was covered with green feed and there was water in every pothole in the rocks. The more I think of it the less logic I can find in such behavior—but after all, a logical burro would be about as rare as a ground sloth.

Our time in this field was all too short, and much as we would like to have climbed one or two of the buttes and explored some of the caves, we were forced to be

on our way. I am sure, however, that Desert Magazine readers who visit this area will have plenty to do and find—and if they come upon a burro calmly chewing at a barrel cactus, I wish they would snap his picture for me.

...

Weather

FROM PHOENIX BUREAU

Temperatures—	Degrees
Mean for month	59.8
Normal for March	60.7
High on March 28	83.0
Low on March 16	40.0
Rain—	Inches
Total for month	4.82
Normal for March	0.68
Weather—	
Days clear	13
Days partly cloudy	7
Days cloudy	11

G. K. GREENING, Meteorologist.

FROM YUMA BUREAU

Temperatures—	Degrees
Mean for month	64.8
Normal for March	64.1
High on March 19	85.0
Low on March 3	46.0
Rain—	Inches
Total for month	1.54
72-year average for March	0.34
Weather—	
Days clear	19
Days partly cloudy	8
Days cloudy	4
Sunshine 85 percent (318 hours out of possible 372).	

Colorado river—Discharge for March at Grand Canyon 810,000 acre feet. Release from Boulder dam 630,000 acre feet. Estimated storage March 31 behind Boulder dam 23,730,000 acre feet. Gila river flowed into Colorado all month, reaching a discharge near 13,000 second feet, March 22.

JAMES H. GORDON, Meteorologist.

Sez Hard Rock Shorty of Death Valley

By LON GARRISON



"'Success in business,' read Hard Rock Shorty from an impressive looking book, 'consists o' makin' somethin' everybody wants out o' somethin' nobody wants.' Truer words was never spoken. Takes ingenuity, an' we ain't seen any around here since Do Nuthin' Jones moved out."

Hard Rock folded the book reverently and reflected on the eternal qualities of truth and ingenuity.

"This Do Nothin' Jones was about as lazy a galoot as ever lived to grow up. Seemed like just pullin' his pants on was exercise enough for a day. An' for a week at a time he wouldn't wear shoes so he wouldn't have to lace 'em up.

"But when it come to figgerin', Do Nuthin' was a top hand. Any work that needed doin', he c'd figger around like a banker doin' interest rates. He was sort o' hard up one time an' he figgered out a way to make sandpaper. Got Baldy Banks to do all the work, but by gum it was sure neat!

"Borry'd Baldy's old windmill an' rigged 'er up along side o' his shack. Used this windmill to wind butcher paper off o' one roller onto another'n about six feet lower down. Then he got in a barrel o' that quick-dryin' mucilage and borry'd my fly-spray gun, and that was all he needed.

"I was down there the first time he tried 'er out. A sandstorm was blowing across the valley and Do Nuthin' jest sat there comfortable-like and started sprayin' glue on the paper. He yelled at Ol' Baldy to kick the windmill into gear, and they started windin' up sandpaper.

"All they had to do was change rolls of paper once in a while and the rest was automatical.

"Worked good too, an' was a number one sandpaper. No trouble sellin' it either. But the next month Baldy had to leave and do some assessment work on his claims and Do Nuthin' was too lazy to change rolls. So he just moved out and left the sandpaper machine a sittin' there."

In Defense

BY FRANK McCULLOCK
Fernley, Nevada

The Land that God forgot!
Who wrote this travesty
Knows not the Desert in the Spring,
The Mountains in their majesty.
Nor seen the glory of the setting sun,
Nor splendor of a desert dawn,
Nor purple shadows on the hills,
Nor heard the whispering breezes fawn
Upon the trees when twilight's come.
He has not seen the silver thread
That comes from hills of snow,
And laughs and gurgles in its bed
That leads to a lake below,
That has the blueness of the sky,
The wanton wildness of the sea,
And in the rocks upon its shores
Imprisoned mystery.
For had he looked with seeing eyes
On sunset in the west
He would not say "A land forgot,"
But "Land that God loves best."

PASSERBY

BY KATE CRICHTON GREDLER
Mount Kisco, New York

I am far from the desert, but I know 'long
the trail
The ocotillo's rifles bear thin bayonets of
flame
And where evening primrose lay in drifts as
white and frail
As snow, like snow they're melted in the fires
of May. My name
I wrote upon the sand. Look not to find it
where next year
The pale encelia gilds the arid land. I shall
not hear
The swift wingbeat of swallows skimming the
sandy seas,
And where my shallow name was writ, a fra-
grant desert breeze
Had only to pass like a sighing breath and left
not a mark to show,
But the purple chia will bloom as fair,
The bright stars swing as low.

DESERT LAKE

BY WINIFRED GRAY STEWART
Crescent Mills, California

These are not earthly waters;
This is a lake out of a lost dream,
Where clouds lie, levelled in sleep,
And all the sky's colors gleam.

Winds walk here with steps not seen,
And whisperings that are heard
Only by lean cliff and lone mountain,
And water-loving bird.

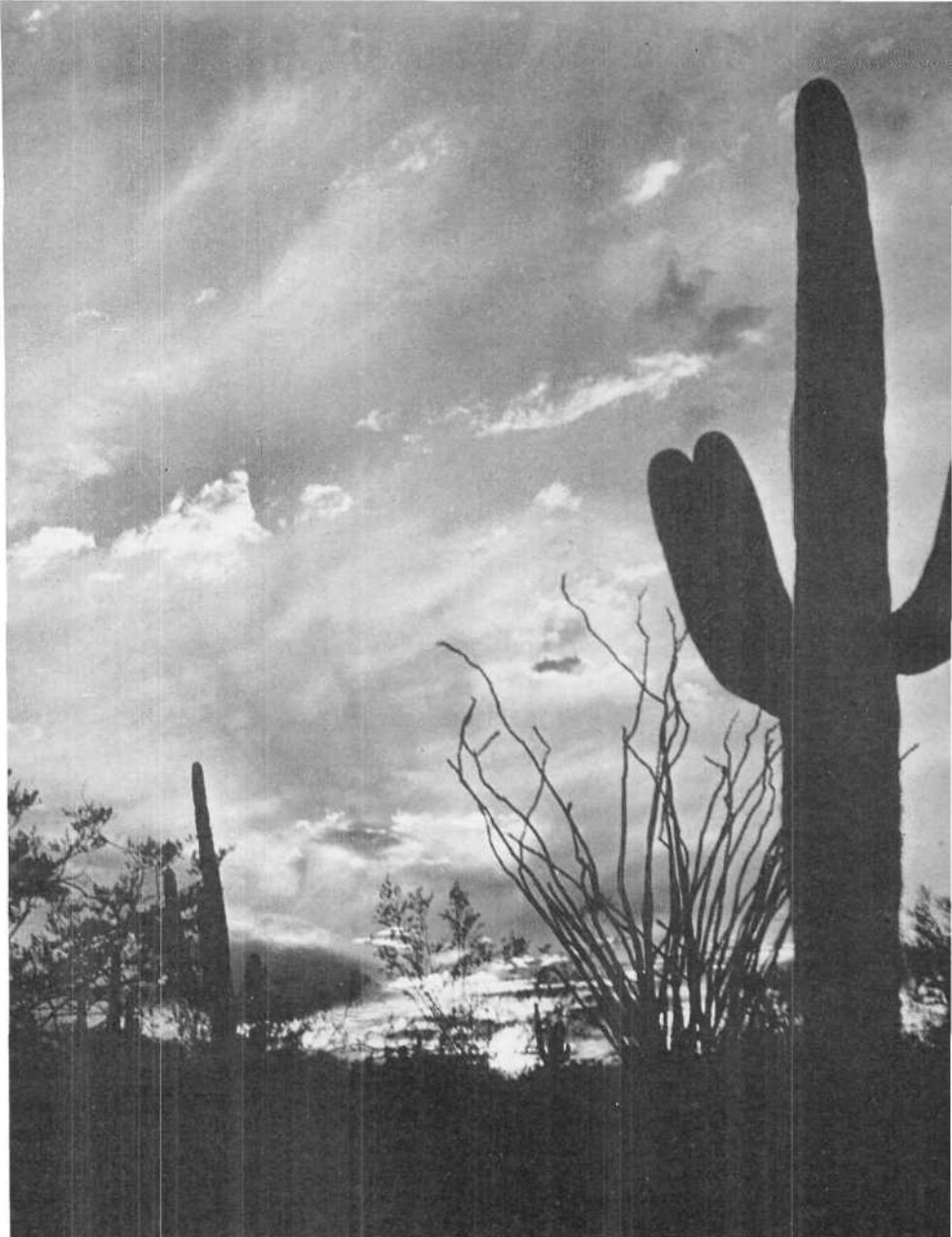
Men who pause here drink deep.
Shading eyes with hands, they turn away
To tell of the taste of snow-fed springs.
But of this lake's loveliness there is little to
say.

MIRACLE

BY IDA CROCKER DUNCAN
Denver, Colorado

There never was a spring like this!
I say it every year,
When color blurs the desert haze
And flowers and birds, so dear
Come flocking back, a rushing throng
And suddenly — a song! a song!

Yet every year it is the same,
This perfect, breathing sight,
When Beauty walks from sealed tombs
Illumed in golden light
A blessed miracle, I view—
Not death, but only Life is true!



This picture by June de Bella of San Jose, California was awarded second prize in Desert Magazine's March photographic contest.

MIRAGE

BY MYRTLE MELVIN FORTNER
Llano, California

On desert road at dawn I passed.
A lake I seemed to see;
Upon its shores were houses massed—
Where these things could not be!

I rode again that way, to view
A stretch of dull grey sand;
No tree nor house that terrain knew—
An arid, worthless land.

A desert waste or gleaming towers?
What can the answer be?
I ponder many thoughtful hours
On this strange mystery,
For who can say which one was dream—
And which reality?

CREED OF THE DESERT

BY JUNE LE MERT PAXTON
Yucca Valley, California

Up in Death Valley, on a barren knoll,
Old Mother Nature carved out a bowl.
She had many small, but needed a greater
That's why she made Ubehebe crater.

THE DESERT

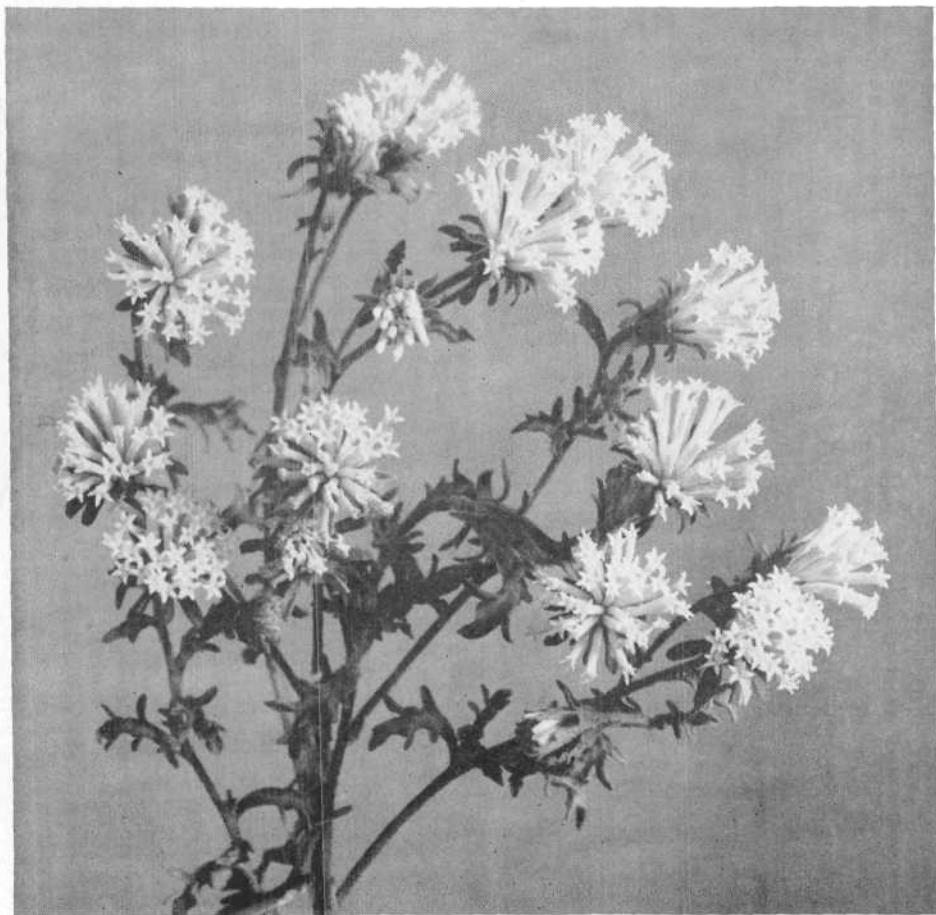
BY CRISTEL HASTINGS
Mill Valley, California

Forgotten trails wind aimlessly along
Through miles of sage, half hidden by the sands
That drift in mounds, obliterating marks
That once were guide-posts in these western
lands.

Gaunt cacti rear their thorny arms and cast
A shadow like an eerie, grotesque thing,
And sagebrush hides a mound of sun-bleached
bones
Out where low western winds their sad dirge
sing.

Comes the soft sound of whispering at night—
The furtive shifting of the yellow sand
Running in tiny ripples with the wind
And molded by some unseen, phantom hand.
The blue mirage of water trembles low
Along horizons hazy with old dreams—
A mocking cloud sails on in burning skies
Leaving an aching memory of streams.

A breathless dawn brings promise of a day
Whose panting hours shall be marked with pain
And thirst—and blinded eyes and aching heart,
And bitter memories of cooling rain.
But when dusk hangs beyond the silver stars
That pierce the desert gloom like steady eyes,
A chilling sound brings coldness to the heart—
The wailing echoes of coyotes' cries.



Starburst, the common pincushion of the Mojave and Inyo deserts.

Pincushions for Desert Fairies

By MARY BEAL

BOTANISTS call them *Chaenactis*—and that probably is a very excellent name for the scientific fraternity to use in identifying them. But for those who tramp over the desert in quest of pretty blossoms the common name of Pincushion is quite appropriate, and much easier to remember. The closely clustered flower heads will readily appeal to your fancy as a perfect pincushion for the elves in their far off fairyland.

One species, *Chaenactis macrantha*, deserves special mention because it is known to its intimate friends as Starburst. These floral Starbursts are not as spectacular as the fiery Fourth-of-July variety that explode in mid-air in a dazzling burst of sparklers. Ours are modest little starlets, content to stay close to earth—but they are radiant little blossoms nevertheless.

The plant is small, its grey-green foliage and reddish brown stems inconspicuous against the ground, but you'll find the corollas radiating in a sprightly cluster of starlets that is altogether captivating.

Seldom over 6 inches high, perhaps only 3 inches, the plant is often much branched and bushy in form, its downy herbage flecked with soft wool. The rather thick leaves are divided into oblong lobes. Each slender tubular flowerlet of the cluster is tipped with a tiny 5-point star, the complete head $\frac{1}{2}$ to $\frac{3}{4}$ inch broad. The narrow involucre bracts are in series of 2,

the shorter outer ones recurved, the erect inner ones spreading widely as they end in stars. The stamens are concealed within the tube. The hairy seeds are crowned with 4 oblong, silvery-white scales, usually encircled by an outer row of very short ones.

You'll find this intriguing species in the Inyo and Mojave deserts of California, on gravelly and stony hills and mountain slopes, also in Arizona, Nevada and Utah.

Following are the other common desert species of *Chaenactis*:

Chaenactis fremontii

Probably the commonest desert annual and one of the most persevering, defying droughts that discourage other plants. Children often call it Bachelor's Button, as well as Pincushion, and in some areas it bears the romantic alias Morning Bride.

It may be only 3 inches high but under favorable conditions attains a height of 16 inches, with few to many branches near the base. The smooth hairless herbage is often wine-red on the lower parts, the dark blue-green succulent leaves divided into a few narrowly linear lobes. The flowers, all discoid, are white, frequently tinged with pink or old-rose, the outer corollas conspicuously enlarged, the heads $\frac{1}{2}$ to 1 inch broad, growing singly on long peduncles. The hairy seeds bear a pappus of unequal scales. Very abundant in the Mojave and Colorado deserts, extending into Arizona and Nevada.

Chaenactis xantiana

Similar to *fremontii* but a more robust plant, sparsely woolly on upper parts, the branches more leafy and stouter, more or less hollow and enlarging upward to the flower-heads. The involucre are quite woolly, with long, unequal bracts, their recurved tips densely downy. The white or flesh-colored corollas are all discoid, with none enlarged or only slightly so. The leaves are finer than those of *fremontii*, with 3 to 7 thread-like lobes. An interesting species of the Mojave desert and Arizona.

Chaenactis carphoclinia

The most pincushiony of them all, the rather small heads compact and rounding, with no enlarged corollas but liberally studded with "pins." The florets are white or pink-tinged. Grows from 4 to 12 inches high, with very slender, branching stems, the herbage finely mealy-hairy, the leaves with remote thread-like lobes. The seeds are very hairy. Common on gravelly and pebbly flats and low hills of the Inyo, Mojave and Colorado deserts, Arizona, Nevada and Utah.

Chaenactis stevioides

Similar to the preceding, with greyish herbage somewhat flecked with wool or webby, the leaves with short thickish, linear lobes, the flowers white, a few of the marginal corollas somewhat enlarged. Frequents sandy flats and slopes of the Colorado and Mojave deserts.

Prizes to Amateur Photographers

Each month the Desert Magazine offers two cash prizes for the best camera pictures submitted by amateur photographers. The first award is \$5.00 and the second \$3.00.

Pictures are limited to desert subjects, but there is no restriction as to the residence of the photographer. Entries may include Indian pictures, rock formations, flowers and wild animals, canyons, trees, waterholes — in fact everything that belongs to the desert country.

Following are the rules governing the photographic contest:

1—Pictures submitted in the May contest must be received at the Desert Magazine office by May 20.

2—Not more than four prints may be submitted by one person in one month.

3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

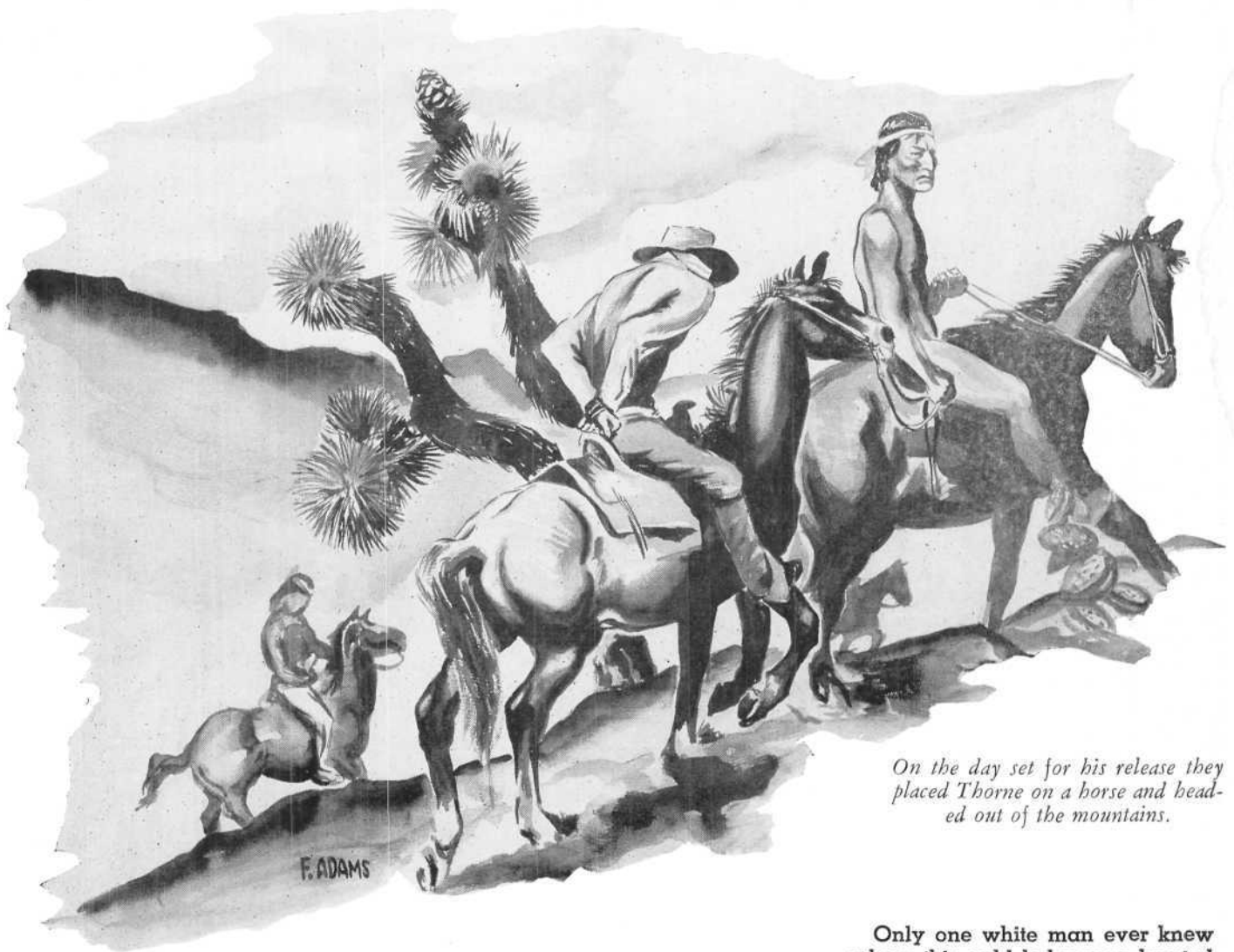
4—Prints must be in black and white, $3\frac{1}{4} \times 5\frac{1}{2}$ or larger, and must be on glossy paper.

Pictures will be returned only when stamped envelopes or photo-mailers are enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the May contest will be announced and the pictures published in the July number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.



On the day set for his release they placed Thorne on a horse and headed out of the mountains.

Lost Pesh-la-Chi

By JOHN MITCHELL

Illustration by Frank Adams

DOCTOR THORNE, an Arizona pioneer, spent the last 39 years of a long and eventful life in and around the rugged ravines of the Four Peaks country, northeast of the city of Phoenix, Arizona, searching for a fabulously rich gold ledge said to have been shown to him by the Tonto Apache Indians during the many years that he was held a prisoner by the tribe.

It was in 1849 that Thorne, then a young physician just out of school set out across the great plains infested with hostile Indians. A year later he was captured by the Tonto Apaches. The Indians treated him well but recognizing his skill as a physician, refused to turn him loose.

In the year 1861 about the time the Civil war broke out, a great drought came upon the Indian country. Piñon nuts and seeds of all kinds were scarce, wild game drifted away in search of feed. The Apache

warriors were all out raiding and to make things worse disease broke out among the women and children of the tribe.

The Indians believed that certain kinds of diseases were caused by different kinds of animals. If caused by a snake, the medicine man danced the snake dance to the accompaniment of weird music made by a gourd filled with pebbles. If the disease were caused by a deer, the medicine man decked himself in a headdress adorned with deer horns and danced the deer dance.

When the Apache medicine man had exhausted his hatful of tricks without finding a cure and the epidemic continued to grow worse, the old men of the tribe appealed to Doctor Thorne for help. Realizing the seriousness of the situation and that his reputation as a physician was at stake, Thorne decided to use one of his strongest remedies — Hickemia, a tuber

Only one white man ever knew where this gold ledge was located — and after 39 years of search he died without finding it. If the story he told was true, a fortune awaits the prospector who eventually re-discovers this rich vein of quartz.

that still grows profusely over many parts of Arizona.

How the Creator of all things managed to wrap up so much dynamite in such a harmless looking little root, is beyond the power of science to determine. One teaspoonful of the powder made from it was sufficient to stir the vitals of a drugstore Indian.

But happy days were just around the corner. The remedy worked like magic and Doctor Thorne tapered off the cure with a gourdful of soothing squaw tea, made from a bush found all over the west. By tom-tom, smoke signal and the grapevine telegraph the doctor's fame spread far beyond the borders of Apacheland.

Indians, like elephants, never forget. So when the warriors returned from their raids, a powwow was held and it was decided to release the doctor in order that he might return to his own people. To

show their gratitude they agreed to show him their gold mine (Pesh-la-chi).

On the day set for release they placed Thorne on a horse and with six feathered warriors as an escort the little party headed out of the mountains in a southerly direction. After riding the skyline of several high ridges they dropped down into the lower country and skirted a high mountain to the northeast of the Superstitions. Late in the afternoon a stop was made and a blindfold was placed over the doctor's eyes.

Just before sundown the three warriors who were riding ahead halted and asked Thorne to dismount. When the others came up the blindfold was removed and Thorne found himself standing in a narrow canyon. When his eyes had become accustomed to the sunlight, he saw at his feet a white quartz vein about 18 inches wide, cutting across the bed of the canyon and outcropping in the walls on each side. The vein was full of bright yellow metal that glistened in the sunlight. Before the blindfold was replaced Thorne looked up and saw the Four peaks vividly outlined against the sky. The sun was at his back, so the vein must have been either on the south or west side of the Four peaks mountains.

As the party rode down the sunset trail the doctor tried to remember the landmarks so he could return later and work the mine, reimbursing himself for the long years that he had been held in captivity.

Early the following morning Thorne was released on the edge of the desert east of what is now the city of Phoenix. Years later when the Apaches had been rounded up and placed on reservations, Thorne returned to the desert country and started the long search for the white quartz vein.

He made many trips into the Four Peaks country and was well known to a number of old timers living in Tempe and Mesa. To these friends he talked freely of his mine and of his experiences among the Tonto Apaches during the years that he had lived with them. When too old and feeble to endure the many hardships of the rugged mountains he went to the Rio Grande country in New Mexico, where he died without having found a place that resembled the canyon where the Indians had showed him the wonderful vein of gold ore in the days of his youth.

Fame and fortune undoubtedly await the prospector who finds the lost Pesh-la-chi mine over which the Four peaks stand silent guard.

DESERT QUIZ

If you have a one-track mind you'll not grade very high in this test—for the reason that it includes a wide range of subjects: Botany, mineralogy, Indians, geography, zoology, history and general lore of the desert country. But don't be discouraged, because the average person will know less than 10 correct answers in this quiz list. There is no quicker way to build up your knowledge of the Southwest than to use this quiz as a monthly lesson in desertology. If you score 15 correct answers you rate with the Desert Rats. More than 15 grades you as one of those super-students of the Southwest. Answers are on page 35.

- 1—If an old desert rat on a midsummer prospecting trip ran short of water what member of the cactus family would he most likely seek to quench his thirst?
Cholla..... Bisnaga..... Beavertail..... Buckhorn.....
- 2—Leader of the Mormon Battalion which crossed the continent in 1846-47 to aid Kearny's army was —
General Crook..... Kit Carson..... Capt. Cooke..... Jacob Hamblin.....
- 3—Important tributary of the Colorado river which crosses Highway 66 near Holbrook, Arizona, is—
San Juan..... Gila river..... Paria creek..... Little Colorado.....
- 4—The desert shrub commonly known as incense or brittle bush is—
Encelia..... Larrea..... Mallow..... Senna.....
- 5—Zabriskie Point is a well known lookout for travelers in—
Death Valley..... Grand Canyon..... Painted Desert..... Bryce Canyon.....
- 6—Historians generally agree that the Indians who killed Marcos de Niza's negro guide Esteban were—
Apache..... Hopi..... Navajo..... Zuñi.....
- 7—Canyon de Chelly is located in the reservation of the—
Papago..... Apache..... Navajo..... Pima.....
- 8—Screwbean is a common name identifying a certain species of—
Mesquite tree..... Juniper..... Yucca..... Ironwood.....
- 9—Ancient tribal method of disposing of deceased tribesmen of the lower Colorado river Indians was—
Suspend the body in a tree..... Cremation..... Burial in the sand.....
Weight the body and drop it in the river.....
- 10—The capital of New Mexico is—
Albuquerque..... Silver City..... Tucumcari..... Santa Fe.....
- 11—The reservoir from which the Salt river valley of Arizona receives its main water supply is behind—
Roosevelt dam..... Elephant Butte dam..... Coolidge dam..... Boulder dam.....
- 12—State with the least population per square mile is—
Arizona..... Utah..... New Mexico..... Nevada.....
- 13—The book, "The Romance of the Colorado River" was written by—
Powell..... Dellenbaugh..... Kolb Bros..... Freeman.....
- 14—Crystals most commonly found inside of geodes are—
Quartz..... Calcite..... Gypsum..... Limonite.....
- 15—The man generally credited with the discovery of silver at Tombstone was—
Pauline Weaver..... Henry Wickenburg..... Wyatt Earp..... Ed. Schieffelin.....
- 16—The blossom of the Joshua tree is—
Yellow..... Creamy white..... Indigo..... Pink.....
- 17—Wickenburg, Arizona, is on the banks of the—
Bill Williams river..... Big Sandy..... Hassayampa..... Salt river.....
- 18—Banded Gecko is the species name of a desert—
Lizard..... Snake..... Bird..... Fish.....
- 19—The tribal taboo against a young man looking at his mother-in-law is observed by the—
Yuma Indians..... Hualpai..... Yaqui..... Navajo.....
- 20—Billy the Kid was a notorious outlaw in—
California..... New Mexico..... Arizona..... Nevada.....

SODA WORKS

The accompanying photograph of the old I. D. Soda works near Keeler, California appeared in the Desert Magazine's landmark contest in January. No entries had been received when the contest closed, however, and a second appeal for information was published in the March number. Since then many answers have been sent in, giving the complete history of the old plant. The Desert Magazine staff has combined the four most informative manuscripts, and doubled the prize award and divided it four ways between Mrs. Gertrude C. Sutliff and L. J. Dow of Independence, California, Harry Gower of Death Valley junction, and C. J. Aronson of Pasadena, California, who submitted the winning entries.



Photograph by Perry R. Brown

THE picture of the ruins of an old retort or furnace which appeared in January issue of Desert Magazine is part of a ghost mining camp on the dry Owens lake shore known locally as the old I. D. (Inyo Development company).

This old camp is situated two miles west of Keeler on the Death Valley road which branches off U. S. Highway No. 6 two miles south of Lone Pine, California, in eastern California.

The plant was started in the late 1880s and continued in operation through the first world war. Its purpose was to extract the soda salts from the heavily mineralized water of Owens lake. Later the city of Los Angeles began diverting Owens river, and the lake waters began to recede.

The original project was financed by the D. O. Mills of San Francisco and finally was sold to the Natural Products company. A narrow gauge railroad once ran to the plant.

An interesting description of the operation is given by C. J. Aronson who was master mechanic at the plant during the world war. He wrote:

"I was master mechanic at the old Inyo

Development company's plant from 1916 to 1921 or 1922, and I am sending you a picture as it looked when I was working there. The hombre in overalls was yours truly.

"We would throw up levees and make

a vat 1000 feet square and let the water run in from Owens lake. We had a Chinaman who had worked for the company 25 years watch the vat. When there was a change in temperature the soda in the water would settle in the bottom, and it was then his job to drain off the water and refill it again. He was on the job 24 hours a day, and he seemed to have developed an extra sense that enabled him to tell when the temperature was going to change.

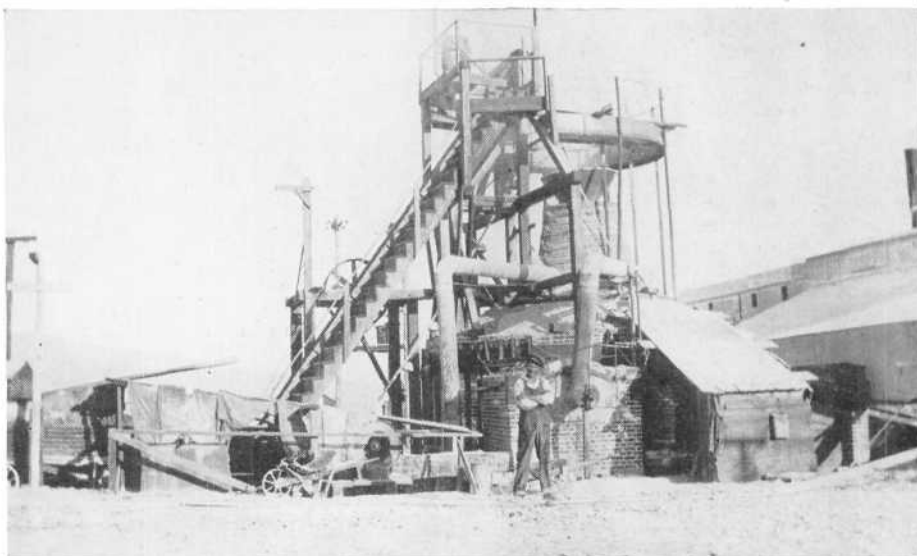
"There were 28 chemical ingredients in the water and that is why the water was drained off as soon as the soda had settled to the bottom of the vat. The company was interested only in the soda.

"When we were ready to work the vats there was a six to 12 inch crust which we called trona. We had about 200 Chinese who would break up the crust, shovel it in cars and haul it to the plant where we would wash it with fresh water. Then it went by conveyor to the kilns. There were several oil burners on the side of the kilns and the heat would melt the soda and it would flow out in a trough in liquid form. A large blower at this point would break it up into little balls the size of a pinhead and as white as snow. Then it would be ground fine as flour and sacked. The Illinois glass company was our best customer."

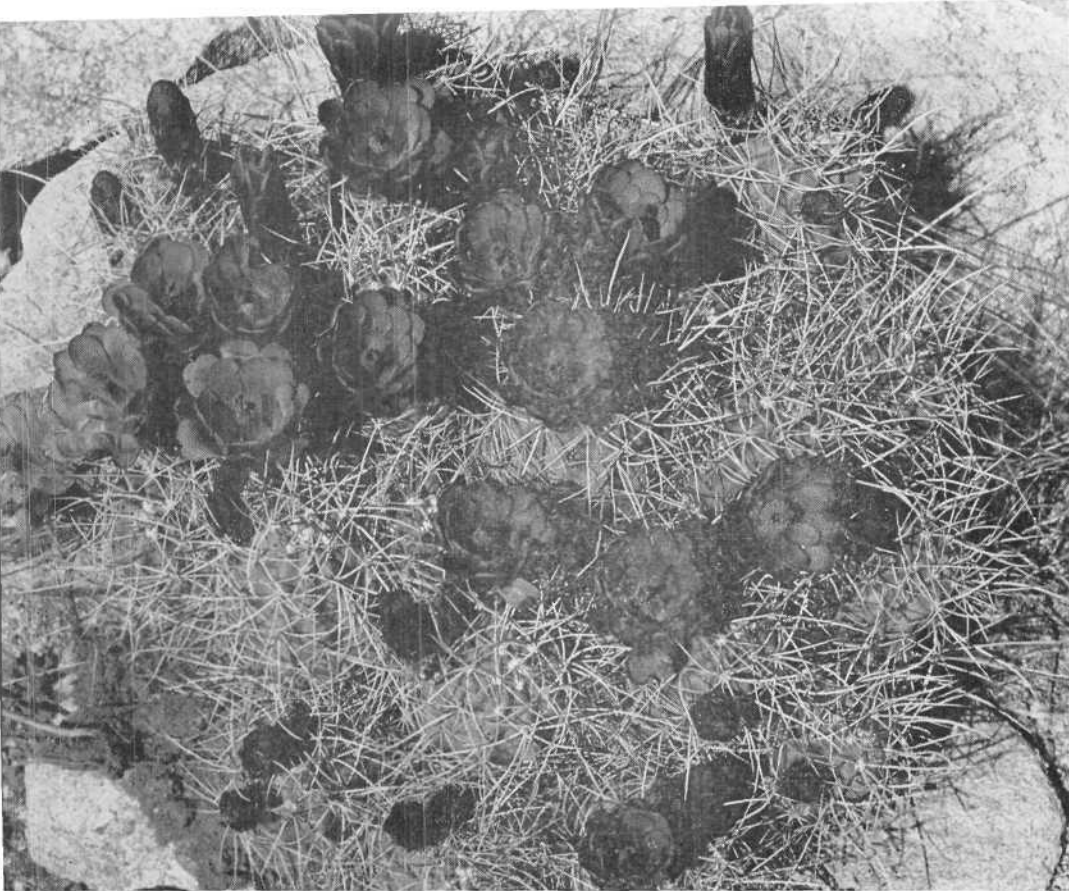
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OLD ARIZONA PRISON IS OPENED AS MUSEUM

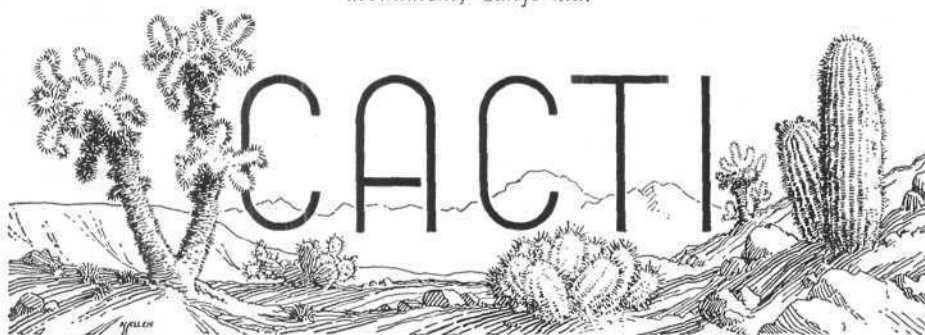
Thousands of persons attended a two-day celebration in Yuma, Ariz., March 29-30, culminating the dedication of Yuma's prison hill museum and park. Hundreds of historical relics are housed in buildings standing on the site of the old territorial penitentiary messhall. Mulford Winsor, pioneer editor and publisher, now Arizona state librarian, was principal speaker on the dedication program, which was broadcast over a statewide radio chain.



Photograph taken when the I. D. Soda works was in operation. C. J. Aronson, master mechanic at the time, is shown in the foreground.



Echinocereus mojavensis growing near the Keys ranch in Joshua Tree national monument, California.



Echinocereus mojavensis

By ROY MILLER

THROUGHOUT most of the California desert country and in western Arizona and southern Nevada *Echinocereus mojavensis* will be found in full bloom during April. Desert visitors, however, will not see its beautiful carmine flowers if they stay on the paved highways in the more level country, as it grows only in high altitudes—usually 3000 feet or above—and is rather sparsely scattered throughout its territory. Probably the finest specimens to be found in California can be seen in the Joshua Tree national monument south of Twentynine Palms. In western Arizona plants of large size may be found in most of the high altitudes, particularly in the northwest. In central and southern Arizona it merges with a closely related species, *Echinocereus polyacanthus*. Fine plants can be seen in the mountains near Good Springs, Nevada, and back in the hills along the St. George highway, but in Utah slight botanical changes have caused another species to be named *E. coccineus* although the plants appear much the same to the casual observer.

Its manner of growth is distinctive. The plant occurs in large clumps or mounds of closely crowded heads which are two to three inches in diameter, covered with long, curved and twisted spines. Sometimes these clumps grow to an immense size with literally hundreds of heads. It is not unusual to find plants of 75 to

100 heads and mounds have been reported with over 500 heads.

The flowers are unusual, both in color and texture. The rich crimson of the petals shades to yellow near the base and with the green pistil and orange stamens makes a striking color arrangement. This is further enhanced by the velvety texture of the flower and by the broad petals which are stiff and thick—almost succulent. The flowers usually start to open about the middle of April and continue until well into the end of May varying some in different localities. Each individual flower stays open three to five days and is soon followed by the fruit which is covered with white spines and bristles.

The fruit undoubtedly was used by the Indians for food as it is sweet and cooling to the taste, but due to its comparative scarcity it must have been considered more as a delicacy than a staple item of diet.

Individual heads cut off are very difficult to root but small plants of three or four heads can be successfully grown in cultivation. They are hardy but do not flower as freely as plants in the wild. Remember though, all cactus is protected by law, and, unless collected on private property with the owner's permission, must not be disturbed. I mention this again at the risk of becoming obnoxious but let's leave our desert as it is, so we can all enjoy it—always. After all, nursery grown plants from seed really do make the best appearing specimens for our garden.

NEVER HAD A RICH GOLD MINE, ADMITS SCOTTY

Death Valley Scotty never owned any rich mining property, has no mine now and never sold any gold. The old prospector himself swore to these statements during trial of a suit Julian M. Gerard, New York investment banker brought against him for accounting on a grubstake agreement made 35 years ago. Actually the money Scotty has scattered around through the years in which he built a reputation based on mystery was furnished by fun-loving A. M. Johnson, wealthy Chicago insurance broker, who felt that he owed a great deal to Scotty because the prospector had persuaded him to go to Death Valley in 1905 when the insurance man was sick. "Scotty has a great appetite for money and I like to give it to him," Johnson told Federal Judge Benjamin Harrison. The judge speaking from the bench, said Scotty "stands here a confessed cheat. When a man from the desert goes to the city, they sell him the Woolworth building. All he gets out of it is a laugh." In this case the judge asserted, "It looks like a man from the desert took the city man down the line." Johnson testified he had advanced half a million dollars to Scotty during the past 30 years, added that Scotty is getting rather old and he does not hold much hope of collecting.

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COL. WHITE TO REPORT ON ANZA PARK PROJECT

Conservation groups in the Southwest have been trying to have 365,000 acres in the Vallecitos area of Southern California set aside as the Anza Desert State park. Certain private groups in the city of San Diego have vigorously opposed the program on the ground that the region has great agricultural and mineral wealth.

In order to arrive at an unprejudiced decision, the California Park commission invited Col. John R. White, regional director of the National park service to make a personal investigation of the lands with a recommendation as to their desirability for park purposes. Col. White's report is scheduled to be made at the April 22 meeting of the park commission.


In the meantime the Anza Memorial Conservation association is continuing its campaign to raise \$2618 by private subscription to pay government filing fees on the park lands if the desert park program is approved by the commission. Under a special act of congress, the state must exercise its option on the public lands before June 29, or the present opportunity to create this park will be lost.

• • •

Oklahoma City...

1941 officers of Cactus and Succulent society of Oklahoma are Harry T. Johnson, president; Jas. H. Hyde, vice president and parliamentarian; Mrs. S. P. Seela, secretary-treasurer; Mrs. C. L. Wiese, historian-librarian; Mrs. Myrtle Conn, representative to Garden Clubs council.

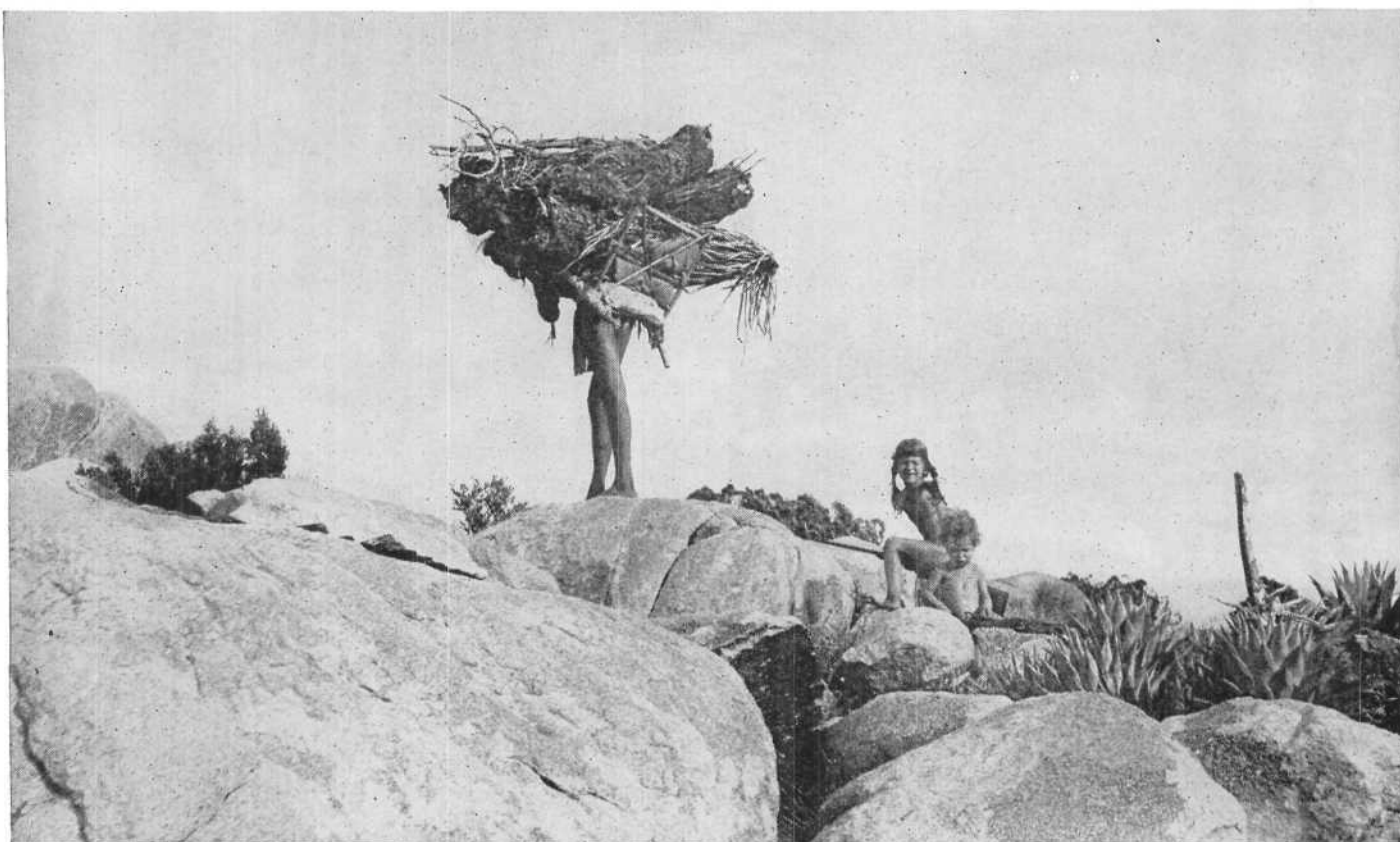
J. B. Lankford, at the March 6 meeting, discussed the Plains cactus, *Pediocactus simpsonii*, described in the October 1940 issue of Desert Magazine. A continuation of the year's feature cactus group — *Coryphanthanae* — was the subject of J. R. Orrell at the March 20 meeting.



CACTUS SEEDS PLANTS

Surprise packet mixed seed 25c with growing directions and illustrated catalog of hundreds of rare cacti and succulent plants, seeds.

R. W. KELLY, Box 235D
Tempe City, California



Marshal South and his family scout the hillsides for long distances to secure dead yucca and agave and juniper for their cooking—and in the winter, heat.

Desert

By MARSHAL SOUTH

SO it is spring again at Yaquitepec. But the free desert knows little of set seasons and cares less. It has been spring on Ghost mountain for a long time. Everything is early this year. Some of the mescals had begun to thrust up shoots by the very first days of February. And there were ocotillo flowers too. As we tramped up and down the trail, carrying loads of supplies for fuel, it was 7-year-old Rider's game to see how many new ocotillo blossoms he could pick out.

The ocotillo is a temperamental thing. It will flower when it feels like it and it cares nothing for precedent. Resolute little banners of scarlet flame wave from the tips of bare, grey wands that still seem held in the torpor of winter. We never cease to be amazed at the tenacity of life and the indomitable purpose that seems to dwell in all desert things. A lesson here that is well worth pondering over.

The life of all desert organisms is hard—not soft. For them there are no cushioned corners or easy short cuts. They have to fight—to steel themselves against adversity, to carry on in the face of seemingly

Here is the first of a new series of articles by Marshal South, whose *Desert Diary* won widespread favor with *Desert Magazine* readers during 1940. The Souths — Marshal and Tanya left their city home nine years ago to find freedom and content on a homestead on the top of a remote desert mountain in Southern California. They have found happiness in primitive living and close association with Nature—but it has not been an easy life. Today they have three children, and a comfortable adobe home built with their own hands. In this series Marshal gives some interesting glimpses of their daily life on Ghost mountain.

hopeless odds. And it has done something to them; to their spirit; to their very fibre. Perhaps this is most strikingly illustrated in the mescal.

A mescal never knows when it is beaten. Chewed off by rodents and toppled over, hanging by the veriest thread, the bud shoot will still right itself with unbelievable tenacity and go on to flower. Even if entirely beheaded the shoot will often thrust out flower buds from the ragged stump. Purpose! Determination!

Home

Do you think it an accident that, all down through history, desert peoples have builded mighty civilizations?

The heavy rains of winter have left their mark on Yaquitepec. In front of the house the whitewashed adobe is scarred with patches of brown where sections of the lime plaster have crumbled and fallen away. And the mescal-and-mud facing of a rear wall is a forlorn skeleton of bare poles. Surprisingly little damage though, in actuality, and until new plastering and whitewashing cover the scars we shall rather enjoy the comfortable, warm look of the brown adobe patches on the walls. There is something sterling and heartening about the appearance of honest adobe. Some deep reminder of man's fundamental kinship with the earth. For, after all, that is where our roots are, in spite of our airy flights and vain imaginings.

Along the house walls where the sun pours its warmth chia sage and delicate branching little yellow-flowered plants are growing. The tender baby-blue of the tiny chia flowers glints fresh against the dark green circles of their ground-hugging leaves. Chia and filaree crowd along the base of our terrace walls. The lavender pink of the filaree flowers glows against

the grey and orange stones. Among them are white flowers too—the delicate little morning-glory-like blossoms that open only at night and in the early morning. A host of varied desert flora, gay with life and promise.

The squaw-tea bush in front of the house is sprinkled thickly with clustering chrome yellow blossoms; and down by the yuccas the white and yellow headings of my tiny desert daisy bushes nod beside the budding beavertail cactus. The barrel cacti too are crowned with flower circlets and the lone creosote bush by the great rock is already dressed in its bright new covering of varnished green leaves and is sprinkled with yellow blossoms. New pink and cream heads nod on the buckwheat. The whole world of desert growth throbs to spring.

There was corn to grind this morning, for we had a craving for corn hotcakes—and the meal can be empty. It is such a satisfaction to grind cornmeal from the glistening whole grain; one can almost see the strength and health spill from the crushed-yellow kernels. There is no "separating" and "grading" and "sifting" — and robbing—of the meal here. We get all of it without "improvements." It is too bad that man's chief commercial ambition seems to be to devise elaborate means to spoil and rob the simple, healthful foods that the Great Spirit provides in such abundance.

How well I remember, when a child, being solemnly told how, in less fortunate parts of the world, many children did not get fine white bread such as we ate. The poor little things had to eat coarse black bread. And naturally I was at the time, in my childish ignorance, duly sorry for them. Well, we know better now. But sometimes knowledge is long in coming. Bread, whether corn or wheat, is perhaps "the staff of life." But all too often it is a staff upon which the termites have been working. Bread at Yaquitepec is made of meal ground from the whole grain, and it is made without even yeast. No, it is not as "impossible" as you might think. Try making it that way sometime. I think you would like it.

The mornings these days are still chill enough for a little fire. Rider and Rudyard like to squat before it while breakfast is cooking, cheered on and encouraged in their tribal plottings by Victoria, who lies on her bed nearby and burbles an unceasing string of weird comment. We have gone back to using mescal butts for fuel. Winter has made tremendous inroads on our juniper pile; it is almost gone. And now, with the lesser need for great fires, the butts serve splendidly. Tanya and Rider go almost every day, searching over the rocky hillslopes, and bring home great loads which Tanya carries in a basket poised on her shoulder while Rider totes long

mescal poles with the dry, dead butts still on them.

This season was so early that most of our mescal roasting is already over, a month ahead of usual. But that is the desert. It is delightfully unpredictable. You never know what sort of a year you are going to have or even what sort of a day it is going to be. No two days or two years are just alike. And changes from calm to storm come with staggering rapidity. Therein, I think, lies the fascination of the desert—and its healthfulness. For one must constantly be on the alert; it is this that keeps one young.

Stagnation is a deadly thing. And so are routine and monotony. Some day we as a nation will learn this, and, learning, will embark on a new lease of life. A nation that has perfectly mastered the art of moving in perfectly ordered lock-step is "perfectly" lock-stepping itself down into oblivion. But this is drifting aside from the matter of the mescals. They are not all gone. There will be enough late comers for several April roasts.

Winds roar in plenty over Ghost mountain these days. But sandwiched between is enough brilliant spring weather to make one rejoice in just the simple fact of being alive. Work is constant—there is always more of it piled up than we can ever hope to accomplish. But perhaps that is what makes the charm of it all. Out under the turquoise arch of desert skies, where the very silence seems to throb with the peace and purpose of the infinite, work ceases to be a drudgery. It slips into its rightful place as a joyful diversion.

When work is something which one does for oneself and from which tangible personal benefit to life and home can be discerned, it is no longer a slavery. This was the keen joy which the pioneers knew—and was the soaring force of spirit that enabled them to accomplish almost superhuman feats. Work!—work in freedom and in intimate contact with the earth.

Somehow everyone at Yaquitepec is singing these days. Tanya's pencil is busy as she snatches odd moments between tasks to capture verse from the chasing cloud shadows and the rustle of the wind-stirred junipers. Three-year-old Rudyard expresses the joy of life in long, rambling chants, half mumbled and half dramatically declaimed. Distinctively savage creations which cease instantly and self-consciously if anyone is so unwise as to let him know that he is being listened to. The chant won't end until someone interrupts. Rudyard is like that. When we have story telling competitions Rider always firmly rules Rudyard out from competing. Rudyard does not tell stories. He tells serials. They go on and on and on and never stop.

The bright warm days that we get now with increasing frequency are ideal for yucca shampoos. And now that we have

plenty of good soft rainwater, we are reveling in them. You take the fibrous interior soapy-sapped wood of the yucca, preferably from the butt or lower portion of the trunk, and pound it. Then work the spongy mass up and down in water until you have a creamy lather. Then shampoo the hair with it. It is wonderfully cooling for the scalp and leaves the hair wavy and with a gleaming glint that no civilized soap can give. Yucca root is reported to be a hair tonic too. It is beneficial, beyond question. But I have no personal data to enable me to pass judgment on the story of an old prospector who solemnly assured me that an Indian squaw, of his acquaintance, being challenged to the feat, produced a luxuriant crop of new hair on the head of a white miner whose cranium was previously "as bare as a billiard ball." This she accomplished by repeated washings with yucca root.

A number of the squaw-tea bushes around Yaquitepec are already generously sprinkled with young seed cones. These green, immature little cones boil up very nicely as a vegetable, provided you get them young and tender enough. As they ripen they develop a quinine-like bitterness. But young and tender and put through the food grinder, which hastens the cooking process, they form a vegetable that is something of a cross between peas and spinach. A quite satisfactory dish. A little limey-bitter in taste, as are most desert plant foods. But it is this very ingredient that carries health with it. The desert animals know these things. You will find the pack rats and other rodents chewing extensively on the bitter yucca leaves at certain life seasons. The wild creatures that are close to the earth as the Great Spirit intended life to be, do not need experts on diet to tell them things.

Rain! A sudden hammering drive that scuds in the wind and bangs upon the roof with the lash of flying buckshot. Startled I glance out of the window to see that the sun is gone and the sky is roofed with grey. All the valleys and canyons deep down below are blotted by a smoke of driving, rolling cloud. This is Spring.

• • •
FAITH

Lose not your Faith. Whatever may befall,
Your Faith alone can carry you through all,
And give you inspiration to renew
Your life, and guide you clearly what to do.

Count every other loss a paltry thing
Compared with Faith, to which your soul must cling.

Faith is our special candle in the night,
Which, burning, guides our wandering steps aright.

TANYA SOUTH.

With his artist's kit in a buckboard or a saddlebag, E. A. Burbank traveled the Indian country and painted so well that Charles F. Lummis wrote of him, "He is by odds the most successful thus far of all who have attempted Indian portraiture." That was during the period when the Apaches were running wild—but despite the bad reputation of the Apache tribesmen, Burbank painted portraits of nearly all their chieftains, including seven poses of Geronimo. The artist is now living in comparative retirement in San Francisco — but his work may be seen in many homes and trading posts all over the Southwest.

He Painted the Apaches

By RANDALL HENDERSON

ON the walls of the colorful living room of the veteran Indian trader Lorenzo Hubbell at Polacca, Arizona, I saw some remarkably life-like character studies of Navajo and Hopi tribesmen, done in crayon.

Lorenzo was showing me his collection of woven rugs and pottery and other native artifacts—select pieces of the finest craftsmanship from the Arizona reservations.

It was an interesting exhibit, but I kept returning to those sketches. They were the work of an artist with far more than usual skill in the portrayal of native character and costume. His name was penciled lightly in the corner.

It was "E. A. Burbank."

Since then, I have come across many of the Burbank sketches and paintings in the Indian country—at Gallup, Albuquerque, Grand Canyon, and in remote trading posts deep in the reservation.

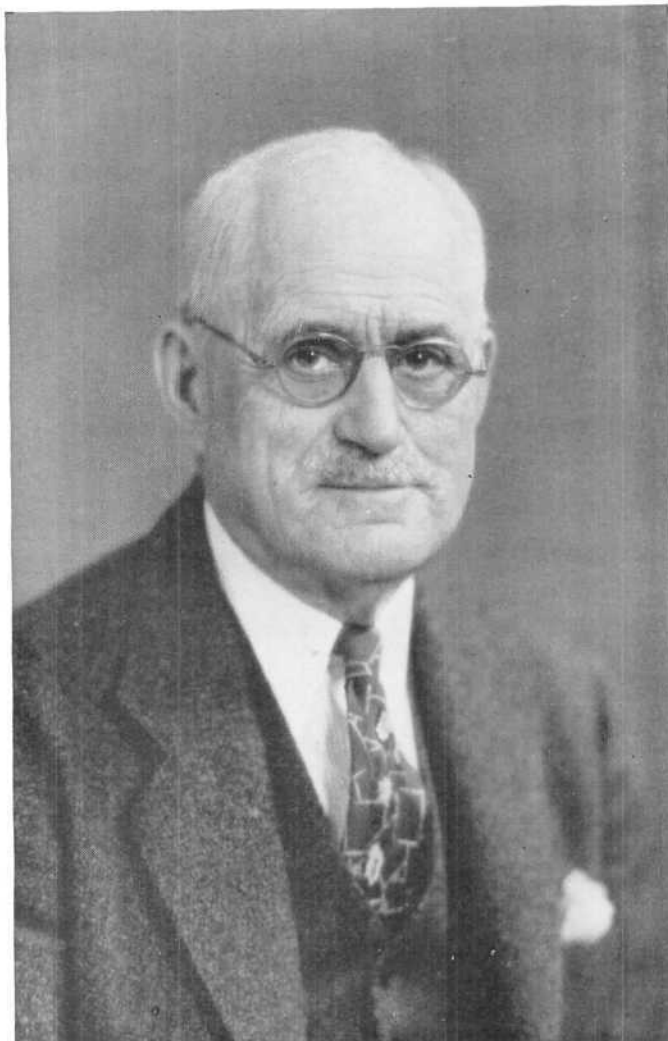
Then one day shortly after the first number of *Desert Magazine* appeared in 1937, I received in my mail a note from E. A. Burbank—just a simple expression of approval for the new magazine of the desert Southwest. Since then many letters have been exchanged and while I have never met this artist personally, I have learned enough about his work to have a great admiration for his achievements. Much of my information came from an old copy of Charles F. Lummis' magazine *The Land of Sunshine*, out of print for many years.

Burbank was painting and sketching in the Indian region of the Southwest during the same period Lummis was delving into archaeology, and through his writings, trying to convince indifferent Americans that desert Indians were something more than mere untutored savages.

The Indians liked Burbank and trusted him. He painted seven portraits of Geronimo, three of Naiche, and his canvases included Mangus Colorado and practically all of the Apache leaders of that period. Of the Apaches, he says:

"Of all the 128 different Indian tribesmen who have posed for me, I found the Apaches the least superstitious, the most honest and friendly. When I made an appointment with an Apache, he always appeared at the time and place agreed upon."

Born in Harvard, Illinois, Burbank began his art training in the old Academy of Design in Chicago in 1874. He studied in



This picture of E. A. Burbank was taken within the past two years.

Munich from 1886 to 1892. His uncle was Edward E. Ayer, first president of the Field Columbian museum, a trustee of the Newberry library and the owner of one of the finest private collections of Indian Americana in this country.

Through the interest of his uncle he turned westward to try character portraiture of the Indians, first in Oklahoma and then in the Sioux, Cheyenne and Nez Perce country. Eventually he reached the Southwest and traveled and worked among Apache, Navajo, Zuni, Hopi and other Pueblo tribesmen.

His first meeting with Charles F. Lummis was in Los Angeles. "I wanted to meet the writer and editor who had been so ably portraying the Indians of the Southwest," he said. "I called at his office on Broadway and was directed to his home along the Arroyo Seco. I had heard much of the unusual home he was building there. When I arrived there I saw a laboring man dressed in stone mason's clothing, and when I explained that I wanted to see Mr. Lummis he replied, 'I am Mr. Lummis.'"

"I spent the greater part of the day with him, and cannot remember a more enjoyable or instructive conversation. He had bought several acres of land and was building a large house with his own hands. He was doing all the masonry and carpenter work, including the making of doors and windows."

Later, in a magazine story, Lummis wrote of Burbank:

"Without the least disparagement to the art of Brush, Farny, Remington and others . . . it is entirely within bounds to say that no one rivals Burbank as an historical painter of Indians . . . One of the reasons why Mr. Burbank can paint Indians lies back of his fingers, and was not learned in art schools. He can not only see, but understand. They are to him not merely line and color, but human character. More ignorant people,



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Burbank's painting of No-Yang-I-Mana, once the belle of the Hopi tribesmen. This was her wedding costume.

who fancy that aborigines are not quite men and women, might be enlightened—if anything can enlighten them—by talk with this unassuming painter.

"Mr. Burbank has in general selected very characteristic types and his portraits are done with vigorous exactness. He neither extenuates nor sets down aught in malice. He neither idealizes nor blinks. From our personal point of view his pictures are harsh—not retouched as we demand of our artists to flatter us, but as uncompromising as a photograph done in strong sunlight.

"Popularly, this may give a mistaken impression, for many will forget that one chief reason why an Indian is so much more furrowed and ugly than we are is because he has no retoucher to make him pretty. But scientifically, this insistence upon the lines in which life indexes character, is very important.

"His work has historic truth and value for which we seek in vain, from Catlin down to date, for a parallel. As Lungren is doing the best and truest work yet done

on the western arid landscapes and atmospheres, so Burbank is easily master of Indian faces."

All this was written many years ago. The man who wrote these lines about E. A. Burbank has been dead for many years, but the artist about whom they were written is still so vigorous that within recent years he toured Death Valley to do a series of drawings for a book about that region.

Mr. Burbank makes his home in San Francisco—but his heart is still in the arid region where so much of the finest of his life's work has been done.

• • •

"CALICO DAYS" REVIVED

Yermo, California, on May 9, 10 and 11 will celebrate "Calico Days," a revival of the wild and woolly life during the 1880s and 1890s when the silver camp was booming. Whiskered prospectors, faro dealers, barkeepers and burros will make the Mojave desert ring again, promises Antone van der Shalk, secretary of the committee in charge.

Desert Place Names

Magazine is indebted to the research work done by the late Will C. Barnes, author of "Arizona Place Names;" to Betty Toulouse of New Mexico, Hugh F. O'Neil of Utah, Marie Lomas of Nevada, and Charles Battye of California.

ARIZONA

FILIBUSTER Yuma county

Stage station listed by Hinton as 44 miles east of Yuma. From here the famous Henry A. Crabb party of filibusters set out for Sonora in 1857. Crabb, according to McClintock, had 68 men, all but one of whom were captured and shot by the Mexicans. Crabb's head was cut off, preserved in mescal and sent to Mexico City in an olla. Idea of the illstarred expedition seems to have been seizure of enough land in Mexico to give each member of the party a good-sized piece and then to have all of this occupied zone annexed to the United States. Poston writes of this place:

"Filibuster camp next we reach,
This camp can novel lessons teach.
Some brave, strong men, long years ago
From here invaded Mexico."

CALIFORNIA

WHIPPLE MOUNTAINS

San Bernardino county

This range was named in honor of Lieutenant Whipple, U. S. Army, who made surveys through the desert regions in the 1850s. Whipple Barracks, once an important army post at Prescott, Arizona, now a federal government hospital, also was named for this officer. Chemehuevi Indian name for these mountains is *Wee-ab'-To*.

SHORTY'S WELL Inyo county

In Death Valley, named for old-time prospector who was buried about two miles away alongside his friend Jim Dayton. Plaque on a monument erected by the national park service at the graves says:

"Bury me beside Jim Dayton in the valley we loved; Above me write: 'Here lies Shorty Harris, a single-blanket prospector.' Epitaph requested by Shorty (Frank) Harris, beloved gold-hunter, 1856-1934. Here lies Jas. Dayton, pioneer, perished 1898." Says the American guide series, Death Valley volume: "Shorty was a very short, chunky man, with shiny gold caps over his front teeth. He was a familiar figure as he stumped along with his burros, covering the whole Death Valley region on foot. Although he worked many claims, he never made much money. His two most famous strikes were Rhyolite and Harrisburg. Dayton drove one of the first 20-mule teams. He was called sailor, though his seafaring seems to have been limited to cooking on a Sacramento river boat."

NEW MEXICO

FAIRVIEW Sierra county

Named and organized as a town in 1881, taking its name from the beautiful surrounding country, located in a small valley of heavily wooded hills.

LA CUESTA (lah kwes'ta) Taos county

Sp. "the slope." This town is built on the side of a hill, thereby receiving its name from accepted long usage. The Indians term it "the red slope" because at the base of the hill is a deposit of fine red pigment which they use for painting their moccasins and pottery, and their bodies in preparation for their dances.

...

NEVADA

JEAN Clark county

Pop. 50; altitude 2864. On U. P. rr southwest of Las Vegas. Mining district for silica sand in the vicinity. Settled 1905 and named for Mrs. Jean Fayle, only white woman resident at that time.

DIANA'S PUNCH BOWL

Nye county

A gigantic, boiling spring with a rim 150 feet in diameter and 50 feet high, located in Monitor valley to the south of Potts ranger station. It is one of the most important and scenic hot springs in the Nevada national forest area. It was named for Diana, moon goddess and protector of forests and animals. Mountain sheep, antelope, mule deer, sage hens and grouse are found in the nearby game refuge. Monitor valley and the punch bowl may be reached from Austin or Tonopah.

...

UTAH

SULPHURDALE Beaver county

Alt. 6,015; population 65. Derived its name from sulphur mines in the vicinity. In 1918 the name was changed temporarily to Morrissey, for the man who operated the mines a few years.

SUGARVILLE Millard county

Alt. 4,550; pop. 240. So named because of the importance of the sugar beet industry. First called Omaha for Omaha, Nebraska, later renamed Alfalfa at a time when alfalfa was the most important crop raised by the settlers.

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- PLAYING

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INDIAN PUEBLOS

Vera Perkins of Overton, Nevada, won the March Landmark contest conducted by Desert Magazine. She identified the adobe houses in the accompanying picture as the reconstructed Pueblo dwellings of ancient Indian tribesmen who once dwelt in southern Nevada. Her story of these structures and the prehistoric civilization of that area is reprinted on this page.



By VERA PERKINS

THE "Mud Houses in Nevada" shown in the Desert Magazine's landmark contest picture in March are near Overton, Clark county, in southern Nevada.

They are reconstructed Indian pueblo structures located on the top of a little hill near Overton museum. To reach this place take Highway 91 out of Las Vegas. Fifty miles along the road turn to the right on a paved road that follows the Moapa valley 15 miles to Overton and thence to the museum a quarter of a mile away. In the museum are many artifacts taken from this area.

The adobe houses and museum were built in 1934 by CCC boys under the direction of Tom Miller and Cliff Bailey. They were built of sun-dried adobe and have flat wattle-and-daub roofs. Most of the houses are circular and some of them are partly underground with ladders reaching the interior from the entrance in the roof.

This is the second group of houses built in an effort to preserve the architecture of these ancient tribesmen. The first houses were built in 1924 in the center of the "Lost City" area. They had to be abandoned when the waters of Lake Mead rose and submerged the region.

According to M. R. Harrington of Southwest museum and director of archaeological research at Lost City, there were five stages of prehistoric Indian civilization here. First were the Gypsum cave dwellers, Basketmakers I, II and III, the

Pueblos, first stage, and finally the Pueblo Grande de Nevada or Lost City pueblos.

Excavation and research was started in 1924 and continued at intervals over a period of 12 years. The excavations revealed evidence of Indian settlements extending along the east bank of Muddy river a distance of approximately five miles. The largest pueblo comprised nearly 100 rooms, arranged about two courtyards, most of the structures above the surface of the ground rather than partly beneath it as the earlier pueblans had built.

Farming appeared to have been their main occupation. They raised corn, beans, squash, gourds and cotton. They hunted mountain sheep, deer and rabbits. Their main weapon was bow and arrow.

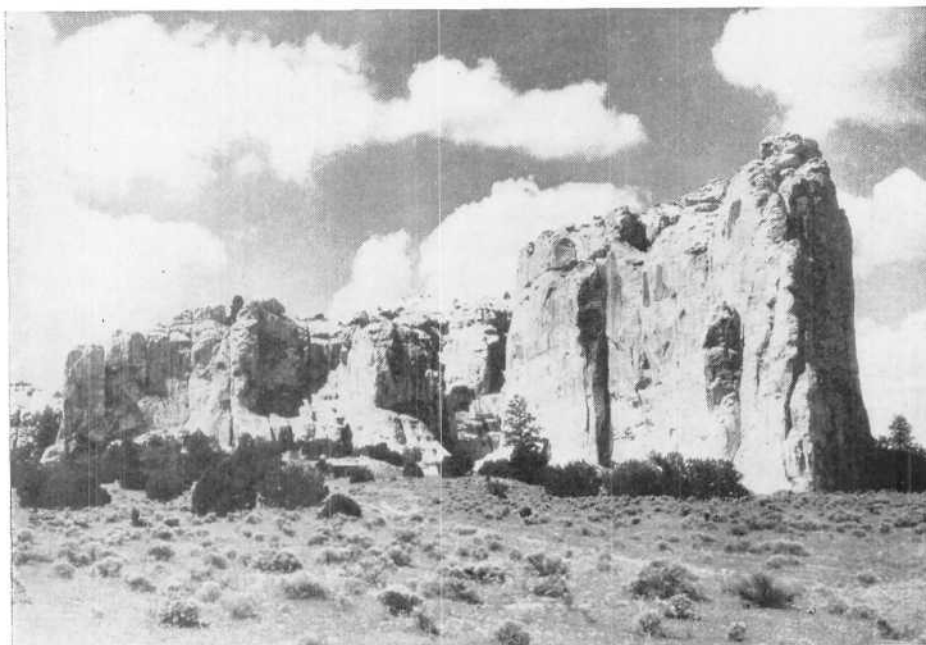
They did a little mining and quarrying for rock salt, turquoise and paint materials. They used crude stone picks and hammers in their mining.

Their cotton was woven into blankets, dresses for the women and breech-cloths or kilts for the men. Their coarse cotton cloth generally was white, but occasionally dyed purple. They also made blankets of rabbit skins and feathers.

They buried their dead in ruined and abandoned houses, ash-dumps adjacent to the buildings, and sometimes in occupied structures. The bodies were prepared for burial by folding the legs with knees against the chest and heels near the hips. Personal belongings frequently were buried with the remains.

Rocky Buttress in New Mexico!

Who can identify this picture?



Prize Contest Announcement

Nearly every southwestern traveler will know the rock shown in the above picture. It is one of the most widely publicized landmarks in New Mexico. A book might be written about it.

This is the Desert Magazine's prize Landmark contest picture for May. The person who submits the most accurate and informative descriptive story of not over 500 words about this rock will be awarded a \$5.00 cash prize.

Manuscripts should identify the Landmark by name, and give all the information, both current and historical, that can be condensed into the word limit. Location and access by highway are details that should be included.

Entries must reach the Landmark department of Desert Magazine by May 20, and the winning story will be published in the July number of this magazine.

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DESERT QUIZ ANSWERS

Questions on page 26.

- 1—Bisnaga or Barrel cactus.
- 2—Capt. Cooke.
- 3—Little Colorado.
- 4—Encelia.
- 5—Death Valley.
- 6—Zuñi.
- 7—Navajo.
- 8—Mesquite tree.
- 9—Cremation.
- 10—Santa Fe.
- 11—Roosevelt dam.
- 12—Nevada.
- 13—Dellenbaugh.
- 14—Quartz.
- 15—Ed. Schieffelin.
- 16—Creamy white.
- 17—Hassayampa.
- 18—Lizard.
- 19—Navajo.
- 20—New Mexico.

THE SPIRIT OF

76

by JOHN CLINTON



From now on you can call me Shock-Proof John. I've seen everything! Because the other morning when I was driving past the Union Oil station on the corner I almost fell out of my Hispano-Plymouth at what I saw.

There, drawn grandly up to the pumps was a horse and wagon! "This, I gotta see!" says I, and turned back. And when I returned I got the 2nd shock, for what do you think the hay-burner was doing?

Well sir, the driver had put four old auto wheels on his wagon, and he was having the tires filled with air! While he was doing it, one of the boys had put a bucket of water down for Dobbin to drink! It was the most unusual sight I've seen for years!



And while the situation was, to say the least, amusing, the boys at the station were doing their stuff with perfectly straight faces. I'm not sure just what the entire significance of this little drama was, but it certainly proves that the Union Oil boys are gentlemen from way back!



So, in addition to inviting you to drive your car into a Union Oil station for service, I'm now in a position to invite all horse-and-wagon operators to do likewise. It's really too bad that Union can't think up some way for horses to use 76, or Triton Motor Oil, because somehow I think life would be more picturesque (if less convenient) if we had more horses galloping by. Don't you?

UNION OIL COMPANY

Mines and Mining . .

Government buying continues to step up consumption of mercury, with production falling off from 3700 flasks to 3100 flasks in the first month of 1941. Weather conditions were blamed as largely responsible for drop in output, but a contributing factor was exhaustion of ore reserves at some properties. California, Oregon, Nevada, all showed declines in production records. Nevada companies reporting 650 flasks in September and October, turned in only 40 percent as much in January. Arizona, Arkansas and Texas are well above 1939 monthly averages.

. . . .

Goldfield, Nevada . . .

Here's a story revived by the Goldfield News, Mrs. Amos Dow acting editor: Two miners ran out of celebration money, ate dynamite, got in a fight. One was blown to pieces by a body-blow and the other, heart broken at the death of his friend, jumped from a cliff and exploded. Mrs. Dow reprinted the story from the file of the News of December, 1908, authenticity of the report is again under fire.

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Tucson, Arizona

Tucson, Arizona . . .

Primary magnesium production in the United States during 1940 set a new record. Output of 12,500,000 pounds is largest in history, reports the federal bureau of mines, 87 per cent above high of 6,700,000 pounds in 1939. Production in 1941 is expected to reach 30,000,000 pounds. Tremendous demand is due chiefly to the national defense program. The metal plays a vital role in aircraft production, in munitions larger quantities of magnesium powder are being used, other uses are being found.

. . . .

Washington, D. C. . . .

Metals produced in 1940 in the United States exceeded in value the totals for every year in history with the exception of 1917, 1918 and 1920. This is the estimate of Dr. R. R. Sayers, director of the federal bureau of mines. A summary issued by Dr. Sayers says estimated total value of all mineral products in the country for the past year is \$5,600,000,000, or 15 per cent above 1939. Estimated total value of metal products in the nation in 1940 is \$1,650,000,000 or 28 per cent above 1939.

. . . .

Reno, Nevada . . .

Nevada is the only commercial producer of cobalt in the United States, according to Frank Williams, regent of Nevada university. Ore is treated at the Barefoot mill in Mesquite valley, from 500 to 1,000 pounds of high grade cobalt concentrates the output every 24 hours.

. . . .

Salt Lake City, Utah . . .

United States mines are now producing more metals required for national defense than at any time since 1918. But Julian D. Conover, secretary of the American mining congress, warns that some kind of priority must be set up for obtaining tools, equipment and skilled workers, if this peak production is to continue. Conover reports a shortage of steel alloys already has developed in some factories making mining machinery and tools.

. . . .

Douglas, Arizona . . .

Refined copper stocks in this country amount to slightly less than one month's requirement. Domestic refined production is 15,000 to 20,000 tons a month short of consumption. Price can be controlled largely by the government through the amount of the red metal brought in from South America. This means the price will remain stabilized unless there is a sharp increase in the price of all commodities. These are the opinions of Cleveland E. Dodge, vice-president of the Phelps-Dodge corporation, in an interview given here. Dodge says industrial activity and business generally are running at a rate as high as ever experienced, "we are reaching a point where everything is being brought into use."

. . . .

Rawhide, Nevada . . .

Tungsten ore is moving steadily in a new fleet of trucks from the Nevada Scheelite, inc., mine southeast of here to the mill recently enlarged from a daily capacity of 30 tons to 100 tons. This property has been operated nearly five years. A. J. Mills, manager, reports good ore encountered in a new shaft down 200 feet. Scheelite prospects east and north of here have been opened recently.

Globe, Arizona . . .

National defense officials are said to frown on Arizona small mine operators' association proposal that the government subsidize high-cost copper mines to permit them to reopen without affecting the basic 12-cent price of copper. A Wall street Journal report says the federal tariff commission is undertaking a cost study of a small Michigan company reported to have an output of 4,000 tons a year, and "this may be expanded to include the high-cost Arizona mines."

. . . .

Phoenix, Arizona . . .

Since steel manufacturers began accepting manganese ore running as low as 35 percent, there is increased activity in Arizona manganese properties. The Manganese corporation is said to have taken over the Burmister claims near Mayer, from which several shipments have been made and the same company has acquired claims on the Apache Indian reservation, which D. L. Solomon of Coolidge has been developing. J. D. Lynch mine 12 miles east of Gila Bend, is another source from which the corporation expects to get ore, and R. H. Thompson of Parker is said to be another contractor who will supply ore from a bed on the Arizona side of Lake Havasu.

. . . .

Winnemucca, Nevada . . .

Operating three shifts daily and grinding 150 tons of ore through its concentration units every 24 hours, Nevada's newest ore treatment plant, the West Coast Mines, inc., mill, 11 miles west of here has gone into steady production. A carload of concentrates—gold, silver and lead values—is shipped every other day to a Salt Lake smelter. Ore is mined nearby. Eighty men are employed, 50 of them working underground.

. . . .

Reno, Nevada . . .

Sale of the Arizona Comstock corporation's mine and mill at Virginia City for a total of \$775,000 to A. D. Vencill has been approved by Federal Judge Frank Norcross. The jurist sustained the contention that the main asset of the company "may generally be said to be its known ore deposits."

. . . .

Dayton, Nevada . . .

World's largest gold mining dredge, aimed at engulfing the entire townsite of this once flourishing community, is getting into its stride. Designed to handle 20,000 tons of gravel daily, the huge machine has been scooping up 6,000 yards during its shake-down period. The dredge utilizes conical jigs to shake gold-bearing sands from the gravels. It is working on the edge of the celebrated Comstock lode.

. . . .

Bisbee, Arizona . . .

Large and small mine operators swung in to line when Arizona's No. 1 employer, the Phelps-Dodge corporation, advanced the pay of miners and smelter men another 25 cents a day. More than 11,000 workers will benefit. This wage increase is independent of the sliding pay scales which change with the price of copper. Latest revision in pay checks "is in recognition of the present national situation," says official announcement by Harrison M. Lavender, Phelps-Dodge general manager.

. . . .

Mohawk, Arizona . . .

Six claims have been staked in the Mohawk mountains near here by discoverers who believe they have found the largest deposit of sheet mica known in Arizona.

HERE AND THERE ... on the Desert

ARIZONA

Globe ...

New honors have come to Farman Hanna, local druggist, whose hobby is photography. Cameraman-druggist Hanna has been notified that 11 of his photographic studies of Arizona scenes have been accepted for its permanent collection by the Smithsonian institution of Washington, D. C. Pictures by Hanna have been exhibited in many of the country's leading shows. He is a Fellow of the Royal Photographic society of London, England.

Tucson ...

Federal money to fight the mysterious disease attacking saguaro and organ pipe cactus in southern Arizona is sought by the local chamber of commerce. Dr. J. G. Brown, plant pathologist of Arizona U., who found the disease among the giant cacti last year, recently announced spread of the trouble to the organ pipe cactus.

Tucson ...

One of the 85 Guggenheim fellowships given to American and Canadian scholars and artists for research and creative work during 1941 and 1942 has been awarded to Dr. Edward Holland Spicer, instructor of anthropology at the university of Arizona. Dr. Spicer will make a study of Yaqui Indians.

Yuma ...

Half a million acres have been dedicated as the Cabeza Prieta federal game refuge, a Yuma county range for bighorn sheep. Ceremonies were arranged by the Boy Scouts of America and Major Frederick W. Burnham, author, soldier and world-traveler was guest of honor when a carved stone memorial was erected at Tule Well, 85 miles southeast of here. The memorial stands on a low hill looking down on the old Camino del Diablo, used 400 years ago by the Spanish in their western explorations.

Yuma ...

Wild, un-branded burros roaming the 3,000,000-acre Kofa game refuge won at least a temporary reprieve when court proceedings aimed at their destruction were dismissed in justice court here. Arizona livestock sanitary commission had complained that the burros were eating forage, drinking water that should be reserved for livestock owned by taxpayers. Wildlife conservationists had declared that the burros actually "hog water supplies" and "drive deer away." Hundreds of local petitioners signed protests against destruction of the burros.

Phoenix ...

Four Hopi Indian leaders came here to complain when they read in a newspaper that a group of white men were sponsoring a "rattlesnake dance" in Pinal county to attract tourists. The Hopi want it understood that their famous snake dance is a sacred ritual not to be copied by persons off their reservation. The genuine snake dance, the protestants declare, is never advertised, no admission is charged, and it is not intended to be a money-making venture.

Tucson ...

Indian officers report a murder case involving witchcraft on the San Carlos Apache reservation. It has been reported to K. Berry Peterson, assistant U. S. district attorney, that the accused Apache plunged a hunting knife into the jugular vein of his friend, Augustine Macukay, at Macukay's request. The killer explained he was doing his duty when Macukay believed he was possessed of a witch and that he must be killed to save his tribesmen from misfortune.

Window Rock ...

More rain fell on the vast Navajo Indian reservation during the past winter than during any season of the past 20 years. This increase in moisture has brought a sharp drop in the relief supplies sent out to 19 districts of the reservation. About half as many families received relief foodstuffs this spring, as were on the list last year.

Kingman ...

Two big cattle ranches in Mohave county were sold in March. Bufford Stover of Douglas bought the former Henry Bacon ranch near Hackberry from Tom Cauthen for \$18,000. All ranch equipment, patented and leased land totaling more than 57,000 acres are included in the deal. Nearly 92,000 acres of leased range were transferred when Al Smith became purchaser of the Bonelli ranch at Fig Springs.

Tucson ...

Elma H. Smith, first Navajo candidate for a bachelor's degree at the university of Arizona, is an Indian girl who insists she is "just a typical co-ed." Next June she will complete four years work at the university. It annoys her when anybody regards her as Indian, apart from Americans. "They come at me as if I were something in a museum to be stared at and examined," she protests. Several magazines have published her articles, two of them dealing with Navajo legends are included in Frank Dobie's collection of American folklore. She wants to teach at the Ganado mission of the Presbyterian church.

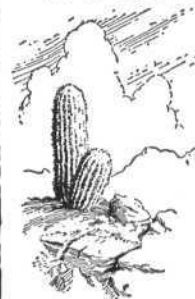
Phoenix ...

Reports from irrigation districts of Arizona indicate the greatest total of stored water in the history of the state's white inhabitants will be impounded before the end of the spring runoff. Precipitation total for the winter season shows the highest figure since 1895-96, when records first were kept, except for the winter of 1914-15, when .41 of an inch more was reported. In October 1940 Salt river reservoirs were at an all time low. Late in March this year these same reservoirs had gained 70 times the volume of water they held six months before.

Ganado ...

Because the present chapel at the Presbyterian mission here is too small to accommodate the crowds seeking to use it, Dr. C. G. Salsbury, mission superintendent, is especially pleased that the congregation of the Second Presbyterian church at Newark, N. J., has voted to give \$15,000 for a new church at Ganado. The structure will be built of native stone. Indian labor will be used.

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Window Rock . . .

Six courts on the Navajo reservation, with Indian judges presiding, heard 1,066 criminal cases last year and 199 civil suits. The Indian courts are in session 20 or more days each month. Fred W. Croxon, chief of the Navajo patrol, gave these figures in his annual report. The patrol polices the 25,000 square mile reservation. Under Chief Croxon serve four Indian service chiefs, an acting chief and 28 privates. A new radio system, highway and telephone extensions are helping patrol work.

Holbrook . . .

Painted Desert Inn, located in the Petrified Forest national monument, is making plans to erect a number of cabins along the beautiful rim drive that overlooks the Painted desert. This area has proved especially popular with artists.

CALIFORNIA

Calexico . . .

First ripe cantaloupes in all the United States are claimed this year by Mr. and Mrs. George Brandt, operating a 420-acre ranch at Mt. Signal, on the Mexican border. Mrs. Brandt says her home is "the last house in the United States." Ripe melons were picked on the Brandt ranch March 15, about a month ahead of the season for most growers, reports the Calexico Chronicle.

Death Valley . . .

With winter rainfall breaking 50-year records in other parts of California, Death Valley bobs up with a claim to retention of title as driest place in the state. T. R. Goodwin, superintendent of the desert wonderland, points to the record: "Only .73 of an inch of

rain fell in the Death Valley national monument during February," says Goodwin, "compared with precipitation of three, four and five inches elsewhere in the state. In February 1940 we had 1.5 inches of rainfall for the period."

Palm Springs . . .

More than 1500 visitors registered at the Desert Museum between February 19 and March 15, the names representing almost every state in the Union, Canada and England. A Cahuilla Indian exhibit loaned by the university of California will be kept on display until the season closes. Recent additions to the live reptile section of the museum include three large ocellated sand lizards, a collared lizard, a baby sidewinder rattlesnake and a large desert iguana or crested lizard.

Winterhaven . . .

Fishing on the lake above Imperial dam on the Colorado river will not be curtailed by establishment of a 51,000 acre wildlife refuge proclaimed in March. This assurance has been received by local sportsmen, who have been informed the Imperial refuge will be for waterfowl only. Portions of the area will be planted to feed, inviting to pintail, mallard, cinnamon teal and other ducks, Canada geese, the American and snowy egret, western and spotted sandpiper, wood and glossy ibis. Gambel quail are expected to increase. The new refuge extends from the dam up river to a point above Picacho. W. C. Henderson, acting director of the wildlife service, says ample public shooting areas will be provided, no fees charged for the use of these areas by the general public. Concessions will be granted to permit setting up camps and boat liveries, available at regulated charges.

El Centro . . .

Tenders of bids for sale to the Imperial Irrigation district of outstanding district general obligation bonds and warrants were opened by district directors April 1. Directors authorized purchase of \$106,000 worth of bonds for \$91,482.55, a saving of \$14,517.45. Action followed final federal court approval of the district's refunding plan.

NEW MEXICO

Albuquerque . . .

Claims to about 1,400,000 acres of public land in New Mexico and Arizona have been surrendered by the Santa Fe railroad in exchange for the right to charge full rates on government freight and mail. Uncle Sam's freight has been carried at 50 per cent discount and mail at 20 percent discount. In New Mexico the company gave up no actual lands, but in Arizona it turned over to the government about 400,000 acres on which it has been paying taxes.

Santa Fe . . .

New Mexico produced 15,944,000 pounds of wool during 1940, with a local market value of \$4,145,000, according to official report from the federal department of agriculture. In the entire country 48,479,000 sheep were shorn of 449,763,000 pounds and this record is an all-time high.

Portales . . .

Forty hunters in the first drive of the season killed 669 jackrabbits in the area near Arch.

Santa Fe . . .

Protecting arm of the law has been stretched to save the horned toad from tourist raiders in this state. Both houses of the legislature approved and sent to the governor for his signature a bill to prohibit killing the little lizard which is in reality as harmless as in appearance it is fierce.

Desert Homes will be Cooled with Irrigation District Power!

- Electricity and the invention of simple inexpensive air-cooling equipment have combined to take much of the sting out of high summer temperatures in the desert region.
- Today, the average home and office in the great Imperial basin of Southern California is more comfortable during the "hot" months than in many of the so-called milder zones.
- By harnessing the waters of the Colorado river the Imperial Irrigation district not only has brought abundant electricity into this area but has made possible the delivery of this hydro-electrical current to homes and industries all over this area, at a cost that is exceedingly moderate.
- Lines have been extended into remote rural areas, so that ranchers far distant from the towns may have all the conveniences of electrically equipped homes — plus the comfort of summer air-cooling.
- Since the Imperial Irrigation district's power system is cooperatively owned and operated, any profits derived from its sale of electricity automatically revert to the benefit of all the people in this area.
- Property owners and investors in Imperial Valley can best serve their own interests by loyal patronage of their own power lines.



NEVADA

Austin . . .

"Yesterday afternoon a train of camels—single and double humped—arrived in town from Virginia City, loaded with merchandise for the house of Albert Mau. Although not heavily laden they were 13 days making the trip from Virginia. The whole weight of their cargo was 5,500 pounds—the greatest load carried by any one animal being 700 pounds. There were 12 camels in the train, half of the number being mere youngsters who were packed with light loads of 50 to 60 pounds. Most of the animals had their feet, made tender by the snow, bound in leather to protect them from the stony ground." This item was printed in the Reese River Reveille in March 1941, originally appeared in the same paper in 1866.

Reno . . .

For emergency military and naval purposes, 3,697,646 acres of public domain land in Nevada have been withdrawn by the government. This is almost three times more than has been taken from any other western state, according to Harold L. Ickes, secretary of the interior.

Battle Mountain . . .

Nearly 10,000 acres of land in Elko county have been set aside as a new reservation for the Temoak bands of western Shoshone Indians.

Reno . . .

To conserve vital food supply, protect soil resources of the Piute Indians of Pyramid lake reservation and restore a sportsman's paradise threatened with extinction are some of the purposes of a dam and fish ladders being built on the Truckee river, which empties into the lake. In the past 70 years water surface of Pyramid lake has been lowered 65

feet. Fish population of the lake has declined dangerously, Indians felt keenly this loss of revenue and subsistence.

Jarbridge . . .

Trapped under an avalanche of snow, Karl J. Wilkinson, 28, forest ranger, was killed near here in March. Wilkinson was working on a snow survey when he was caught in the path of a slide.

Elko . . .

An army bombing plane is given credit for saving the life of a 5-year-old boy, critically ill in Rio Tinto, copper mining camp of northern Nevada. When Dr. T. R. Seager of Rio Tinto telephoned to Salt Lake, the prescription said to have meant life or death to the little patient was flown to Elko in a bomber ordered to make the mercy flight from the Ninth bombardment squadron. When the army pilots landed at Elko, the physician was waiting at the airfield with his automobile. Ninety minutes later, the doctor was at the child's bedside. Later the boy was reported "much improved."

UTAH

Salt Lake City . . .

Ten-year permits for grazing on federal lands, instead of annual licenses as heretofore, will be issued to 400 applicants in two Utah districts, according to Chesley P. Seeley, regional grazier.

Ogden . . .

If the United States government fails to reimburse immediately 51 Utah beekeepers for losses they claim through spreading or insect poison issued by the department of agriculture, the state honey and fruit industries will suffer severe additional losses this year. Otto S. Grow, leading the fight to re-

cover \$100,000 damages for Utah bees said to have been destroyed by the insecticides, gives this warning. Utah's 4,000,000 pound honey crop will be cut 25 to 50 percent unless the beekeepers' claims are paid, Grow said. Most of the beekeepers haven't money to replace their honeymakers, but their losses will not be so great as damage to fruit growers. Bees, Grow asserts, are worth 50 times more to fruit growers as pollenizing workers, than to the honey producers who own them.

Morgan . . .

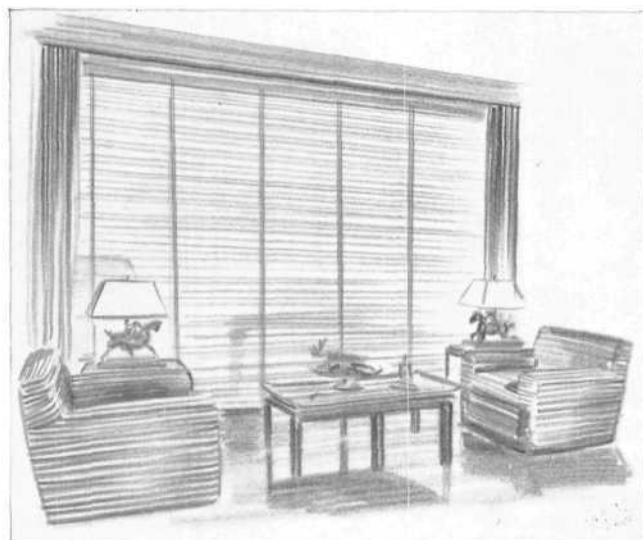
Carl Francis swung a .22 rifle to aim at a target, the rifle went off and the bullet killed Carl's father in a nearby chicken coop. Carl didn't know he had shot his father, reloaded the weapon and leaned over to set the gun butt down on the ground. Again the rifle discharged accidentally, this time killing Carl. Carl's brother was a witness, testified before a coroner's jury to the facts in this strange tragedy.

Salt Lake City . . .

Travel bureau figures show nearly 2,000,000 tourists spent \$37,406,802 in Utah during 1940. In the same year tourist expenditures in California approximated \$245,000,000 says a report to the Salt Lake chamber of commerce.

Salt Lake City . . .

Festivities of the 1941 celebration of Utah Covered Wagon days, scheduled for Salt Lake City July 22 to 26, inclusive, are under the direction of J. Parley White, general manager. Opening events will include a rodeo, with parades featuring the pioneer phase of the program set for July 24. First fiesta poster was displayed late in March, as Manager White launched publicity campaign for the event.



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Gems and Minerals

This department of the Desert Magazine is reserved as a clearing house for gem and mineral collectors and their societies. Members of the "rock-hound" fraternity are invited to send in news of their field trips, exhibits, rare finds, or other information which will be of interest to collectors.

—ARTHUR L. EATON, Editor—

CALIFORNIA CONVENTION SPEAKERS ANNOUNCED

Among the speakers at the California Federation convention at Oakland, May 10-11, will be J. Lewis Renton, of Portland, president of the Northwest Federation of mineralogical societies, who will address the convention on "Northwest Minerals and Gems." Dr. Austin F. Rogers of Stanford university will give an illustrated lecture on jade. He will use slides taken from pictures made in the Chinese village at the San Francisco fair in 1940, and pictures of nephrite jade from Monterey county. Prof. Earle G. Lindsley, astronomer of Chabot observatory, Oakland, will speak on "Meteorites, their discovery and identification."

The grand prize, as announced, for official society exhibit competition, will consist of a beautiful walnut plaque, bearing an engraved shield, surrounded by smaller shields which are to carry the name of the winning society at each annual convention. The winning society keeps the plaque for a year; a third time winner may keep it permanently.

Purchasers of the \$1.50 convention banquet door prize ticket will be accorded entrance to the swap room. Card tables for mineral display may be brought along or secured for a small sum. A supervisor will be in charge at all times, so that displays may safely be left on the tables. No sales will be permitted in the swap room.

COAST COLLECTORS EXPLORE DESERT FOSSIL REGION

Ernest W. Chapman was field trip guide for the Los Angeles mineralogical society group in Imperial valley March 29-30. Chapman, who was for many years president of the California Federation of mineralogical societies, has long been familiar with the locations in Imperial valley. They spent Saturday afternoon at Pinto mountain, where they secured good specimens of the famous and much discussed nodules, and some fine specimens of petrified wood. The night camp was in Alverson canyon. Sunday morning was spent searching for fossils and specimens in the canyon. Later in the day, they shifted operations to the oyster shell beds in the Yuha basin. Here they added fossil oysters, more wood, gypsum, etc., to their collections.

In recent years, several noted geologists have studied the fossil beds of western Imperial valley. Most of them have concluded that all of the fossils are of the Atlantic ocean type, and that some of the fossils are both rare and fine. Local collections account for many of the best.

Amber, which is fossil resin, was one of the first materials used by man for self adornment or amulets. This is probably due to the fact that amber has a beautiful color and is easily worked.



Crystals of Topaz from Minas Geraes, Brazil

This is one of the phenomenally large crystals of precious topaz from the most notable discovery of Topaz ever made. These crystals were found in alluvial ground while mining for optical quartz. The largest crystal found weighed 660 pounds and is now in the American Museum of Natural History. The crystal illustrated weighed 25 1/2 pounds, and is now in the Smithsonian institution in Washington. A number of crystals from 25 to 50 pounds in weight may still be seen in the display of Warner & Grieger at Pasadena, California. These crystals not only are of exceptional size but are remarkably clear. Stones as large as baseballs could be cut and they would be free of any imperfections.

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AMONG THE ROCK HUNTERS

The names of Wilfred and Viola Dressor appear on the list of Sequoia club members. The Dressors were formerly members of Imperial valley gem and mineral society, and have kept up their membership, though now living in Fresno. Once a rockhound, always a rockhound.

Twenty five cars of Sequoia club members enjoyed a visiting day in the Dinuba district. They called on rockhounds in that vicinity and were shown interesting collections.

American Indians attributed magic powers to iron pyrite crystals, and medicine men used them in their incantations.

Due to the fact that rock crystal was often found in mountain caves, ancient man believed, according to Pliny, that it was formed by the congelation of water in dark caverns, where it was so cold that, though a stone to the touch, it seemed water to the eye.

Mrs. Gertrude McMullen lectured on simplified crystallography before Los Angeles mineralogical society, March 20. She illustrated her talk with kodachrome slides.

Five of the 12 charter members of Kern county mineral society are still active in the organization. The society was formed March 18, 1935. Today the group numbers 60.

Paul Walker of Calimesa entertained Imperial valley gem and mineral society March 21 with a lecture on California Indians. He displayed a collection of artifacts showing a well developed civilization. Paul also showed a collection of rocks and minerals for sale or trade.

Paul Walker of Calimesa and member Carl Noren addressed Sequoia mineral society April 1. Field trips for April, May and June were discussed and a schedule decided upon so that members may arrange their dates. The group will visit Randsburg district, Friant, the coast, Chowchilla river, Crystal cave in Sequoia park and lake Tahoe. Sequoia club members wear name plates to their meetings in order to become better acquainted and to learn names as well as recognize faces.

The bi-weekly bulletin of the Searles Lake gem and mineral society reports the election of the following officers: Clarence Schlaudt, president; Virgil Trotter, vice president; Ann Pipkin, secretary-treasurer; all members to be assistant editors.

Mineralogical society of Southern California at Pasadena and geology students of Pasadena junior college made a 10-day Easter vacation rock collecting trip across Arizona into southwestern New Mexico. The group went via Imperial valley and Yuma, returning through Wickenburg and Blythe. About 150 persons participated, at an estimated cost of \$20 each.

Hazel Goff, assistant editor of Sequoia bulletin, writes that the society was well represented at the Federation convention in Oakland.

Two motion pictures were shown to Kern county mineral society at their March meeting. One was "Wings over the Andes," and the other, dealing with crystals, was titled "Nature's handiwork!"

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RAMBLING ROCKNUTS

On a rock-collecting and trading trip through the Southwest with her husband, Bertha Greeley Brown kept a notebook of her experiences—the places visited and the "rocknuts" she met along the way—and is writing about them for Desert Magazine hobbyists. This is the fifth in her series.

By BERTHA GREELEY BROWN

WE traveled westward on highway 90 and coasted into Marathon, Texas, as it lay basking in the afternoon sun.

Dr. and Hattie Lill, torn between two loves—rocks and cacti—rushed about to locate A. R. Davis, local cactus collector. E. K. got permission to store his rocks in a shed by the gas station and I found a store and laid in a supply of groceries. When I returned to where E. K. was bending and puffing under a load of rocks, I saw several Marathoners watching him with puzzled expressions. Had he grimaced and gibbered a bit their curiosity would have crystallized into concern.

After finishing our errands in Marathon, we crossed the railroad tracks on highway 227 and drove south into the Big Bend, last great wilderness of Texas, a combination of arid plains, ancient ocean floors raised high, dry stream beds ripped out of the earth by ages of past torrential rains, mountainous mesas and hogbacks of sedimentation and lava flow, and isolation all held in the gigantic elbow curve of the Rio Grande.

Several times we stopped and looked at the gravels in dry runs. These showed a great amount of silica but nothing of sufficient quality to warrant keeping. At Cooper's store beyond Persimmon Gap in the Santiago mountains, was a pile of agates. Before we could broach the subject of agate locality, the young woman owner said, "I like purty rocks and I ain't going to tell where these came from."

• • •

The sun slid behind fantastic peaks. Dusk came quickly. We moved slowly in and out of dips of numberless streams, past evidence of geological disasters.

It was dark when we entered Terlingua, a typical Mexican village, with its small adobe houses set against the bare side of a gaunt mountain. We were in the heart of the cinnabar mining activities of Texas. The Chisos mine, owned by E. E. Perry, was running full force but the old Mariposa mine, eight miles to the west, has lain idle for 20 years.

Cinnabar, with color that varies from scarlet to brownish-red fading into grey, is mercury sulphide and is the most abundant ore of mercury. Mercury is used in the manufacture of ammunition and for that reason, ghost mines in this district were about to put on life.

In the morning we were awakened by the raucous bray of Bingo, pet burro that stood by the hotel and insisted on early eats. After breakfast, we followed in the wake of a load of Mexican laborers to a mine close by Mariposa and at the latter place we found Frank Duncan, mining engineer. In a letter from Mr. Duncan received weeks before, he had said, "My place is an old stone house—I have every conceivable kind of equipment in it as well as rocks. I have little room but probably you can make out somehow . . ." This was the invitation that brought us to Mariposa, a town crumbled to dust—two houses surviving.

Mr. Duncan seemed surprised and somewhat perturbed when we appeared in front of his house at eight o'clock in the morning. Presuming we had come to stay, he assigned hospitali-

ty duties to Billy Dukes, a young man who shared his bachelor quarters and mineral interests.

Billy pried open the door of the house across the gulch and said, "You can bunk here but you'd better cook on our stove." This was our first experience cooking over a fire of sotol (*Dasyliion*) roots. Billy assumed stoking duties and hung about the kitchen. As he sniffed the aroma of food in keen anticipation, his reserve melted and he became loquacious.

"I'm learning the mining business," he said and confessed, "I wanted to get away from the city and girls." Hattie Lill and I laughed at this handsome youth and his pose of sophistication. Later, when he donned a coon-skin cap and leaned on a rifle of ancient make, we called him the "deerslayer."

That afternoon Billy acted as guide and the men prospected for cinnabar, calcite and aragonite, and found more crystals than they could carry.

Calcite and aragonite are calcium carbonates. They have the same chemical composition but the calcite crystallizes in the rhombohedral system and the aragonite in the orthorhombic.

Before we left we bought some fine agates of Mr. Duncan and Billy. They gave a few extras but failed to throw in any information about localities. As we drove away, Mr. Duncan called, "If you go to the canyon you will meet a friend of mine. He's a rock collector too."

• • •

We followed down the Terlingua river—often in the bottom—to its junction with the Rio Grande at the base of the Santa Helena canyon. Here we met Jack Wise, Mr. Duncan's friend. When we came upon the scene, he was sitting under a small thatched shelter surrounded by a few belongings and rock specimens. Immediately he stood up and came forward, greeting us with the easy grace of a man who had been many places and seen many things, true soldier of fortune.

"Come and lunch with me," he insisted. This we did and seated about on oil cans and benches we enjoyed a meal of beans, bread and coffee served with a generosity and good fellowship. I thought of the words of Seneca who, centuries ago, philosophized, "—we prize more what comes from the willing hand than what comes from the full one . . ."

After lunch we appraised the rocks and bought several. I noticed Dr. Lill making some sort of a bargain with Jack Wise. The nature of this was revealed later when he boasted, "Jack is going to get me an old skull from one of those Indian caves."

Our next goal was the Chisos mountains.



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Helena Jones, Florence, Oregon.

W. Scott Lewis of Hollywood issues an un-
usually interesting mineral bulletin for March.
It contains an article on the adaptability of
animal life to desert conditions, descriptions
of little known minerals and attractive price
lists.

Ernest Curry is the first draftee reported from
among the rockhounds of the Mother Lode
mineral society at Modesto, California.

Long Beach mineralogical society field-trip-
ped to Afton canyon, Death Valley, March 29-
30. Victor Arceniga addressed the club on
minerals of Death Valley at the March 14
meeting. A pot luck supper preceded the pro-
gram.

Gordon J. Ennes discussed radiant energy
as related to mineralogy at the March 6 meet-
ing of East Bay mineral society. Dr. Adolf
Pabst, professor of mineralogy at University
of California, lectured on pseudomorphs at
the March 20 meeting.

H. E. Murdock, secretary of Montana society
of natural and earth sciences at Bozeman, an-
nounces that membership has grown from 3 to
75. Members are from Montana, Arizona, New
York and Illinois. Monthly meetings are on
the first Wednesday.

Southwest mineralogists held their fifth an-
nual exhibit of minerals and lapidary art April
19-20 at Manchester playground auditorium,
8800 south Hoover street, Los Angeles. Educa-
tional mineral and lapidary exhibits were shown
as well as fluorescent display in charge of Joe
Collins. There were also a number of com-
mercial exhibitors. Charles Standridge was
chairman of the show.

Ernest Chapman, former president of the
California federation, spoke, April 1, on "Min-
eral and crystal cavities of the zeolite region of
New Jersey." It was an interesting subject and
well presented.

F. H. Crawford, who recently located a new
variety of agatized jasper in the Searles lake
district, has a 600-pound piece of the material
displayed in his new store at 4641 Crenshaw
blvd., Los Angeles. The material is of gem
quality and is multi-colored. In some instances
it displays beautiful landscape scenes.

Mother Lode mineral society held its annual
election in March and chose the following offi-
cers: Clark McCullough, president; Mrs. Lois
Vincent, vice-president; Mrs. Edna M. Mather-
on, secretary-treasurer; A. M. Husong and E. L.
Matheron, directors.

Golden Empire mineral society of Chico held
its March meeting at the home of Mrs. Fulcher.
Twenty members enjoyed a mineral exchange
and a social hour. On Sunday, March 16, John
Woodworth led a group of 15 members on a
field trip in search of pyrite crystals. After climb-
ing down a canyon, near Paradise, they secured
fine specimens.

Santa Maria rock and mineral club, along
with others in California, has had to call off
field trips due to rainy weather. However, in-
dividuals of the group have found small geodes
and sagenite quartz in considerable quantity.
The next field trip is to be to Coal canyon in
San Luis Obispo county to collect fossil speci-
mens. The club recently visited the home of W.
N. Whittemore at Santa Barbara, where mem-
bers enjoyed a buffet dinner and spent the eve-
ning examining the host's large collection of cut
and uncut minerals, as well as his lapidary shop.

Cogitations . . .

Of a Rockhound

By LOUISE EATON

● One of a rockhoun's greatest joys
is to find some one who never saw a
rough rock cut an' polished an' initiate
him into the cult of rock lickers. Floods
of words explains the difference between
good an' worthless specimens. Advice is
given about where, when an' how to field
trip. An' even sometimes the zeal of
making a convert will lead the rockhoun
to disclose the location of one of his
favorite thunder egg patches.

● "What a nice pile of rocks," sez the
un-rockhoun, "right here handy to throw
at a stray dog 'r to break up a cat ser-
enade." "Ohhh!" gasps the rockhoun.
"No! - - - why, tho' 'r specimens. You
don't throw tho' away — why, you
couldn't. Tho' 'r all GOOD rocks."

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MAPS

BLACKBURN MAPS of Southern California desert region. San Bernardino county 28x42 inches \$1.00; San Diego county 24x28 inches 50c; Riverside county 50c; Imperial county 19x24 inches 50c; Yuma and Gila river valley 17x27 inches 50c. Postpaid. Add 3% sales tax in Calif. DESERT CRAFTS SHOP, 636 State St., El Centro, California.

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BOOKS OF YESTERDAY AND TODAY

—a monthly review of the best literature of the desert Southwest, past and present.

PROSPECTOR ON THE WESTERN FRONTIER

Sixty years of life and adventure in the Southwest have gone into the telling of BLACK RANGE TALES, by James (Uncle Jimmie) A. McKenna. Essentially this is Uncle Jimmie's story, his own autobiographical account of the lucky and luckless days of prospecting and the endless search for gold. But more than that, it epitomizes the varied experiences familiar to those who took part in early-day mining adventures and in warfare with the Indians.

Uncle Jimmie's career began, like Mark Twain's, with steamboating. But wagons were heading west, and it was inevitable, perhaps, that he, too, should go along to try his luck in the mining camps of Colorado and New Mexico. Like most prospectors he held a warm spot in his heart for his first claim where he learned to tell a rich paystreak from a poor one, to pan and even "count the colors" and where "the mighty piles of rock splashed with colors that would shame a rainbow," began to take on a real meaning.

It was the beginning of a long and irresistible trek, filled with all manner of incidents. In a kaleidoscopic panorama the events of the stirring days flash before the reader. The Iron King mine at Kingston, the bears along the Gila river, the story of the Schaeffer diggings, an early visit to the Gila cliff dwellings, the Lost Canyon diggings, adventures in the Black range, Radium wells and many others are subjects of chapters. The reader meets new friends as he follows Uncle Jimmie through the hills, and the old-timer will undoubtedly renew acquaintance with many old towns as well as old friends in the pages of this unique work.

Black Range Tales was published in 1936 and still holds its place as a rare volume, one of interest to the collector of western lore as well as to the more casual reader of true adventure stories of pioneer America. Few first-hand accounts of mining days have been recorded directly from the pen of the true prospector himself, and this narrative filled as it is with diverting experiences, told in a simple, direct style along with the prospector's never-failing philosophy and humor, is a book to be carefully preserved.

The book is illustrated with numerous woodcuts by Howard Simon. The introduction is by Shane Leslie.

Wilson-Erickson, Inc. New York. 300 pp. \$3.50.

MARIE LOMAS.

BENEATH THE GLAMOUR OF OLD VIRGINIA CITY

Vardis Fisher, author of the Harper prize-winning novel "Children of God," has reincarnated the ghost town of the Comstock Lode in his latest novel, CITY OF ILLUSION. He brings Virginia City to life at its rowdiest and lustiest, and spares neither detail nor the readers' finer sensibilities in presenting the life and drama of the wide-open days of the silver rush when life was cheap and liquor cheaper.

Central theme of the story is the strange romance of Eilley Cowan, who ran a boarding house, and Sandy Bowers, ex-mule skinner from Missouri. Intuition told Eilley her boarding house was on pay dirt and she aspired to be rich—the Queen of the Comstock.

Sandy cared nothing for wealth, but he believed in Eilley—and when wealth suddenly began to roll in from the lease of their property she had fantastic ideas for spending it. The eccentricities of Bowers have become legend

around the old mining camp—with truth and fiction so entwined that Vardis Fisher found it a very difficult assignment to ferret out an authentic biography. In fact he makes no pretense of doing so. What he has done is to reconstruct Virginia City as it was when millions in silver were being taken from its mines every month.

In all the turbulent history of the west no town ever equaled Virginia City in sheer madness. Miners banished from California, slick gamblers, outlaws, barflies and rich men anxious to get their hands in the flow of gold—all these made up the population of the City of Illusion. The author has stripped them of their glamour and presented them in all the greed and vulgarity of their unnatural existence.

It is a fast moving story—one that will not inspire a finer regard for human nature, but with the ring of authenticity nevertheless.

Published by Harper Bros., 1941. 382 pages \$2.50.

HISTORIC MARCH OF THE MORMON BATTALION

Scorned and persecuted by their neighbors and finally driven destitute from their homes in Missouri and Illinois, the Mormons had little reason for patriotic loyalty to the American government which had failed in its obligation to protect them. And yet when President Polk asked Brigham Young to recruit 500 of his young men for service in the military conquest of California the Mormon leader sent a battalion on the long march across the continent.

About this Mormon battalion and the courage and hardships of its historic trek to the Pacific Paul Bailey has written his historical novel FOR THIS MY GLORY.

In all the annals of military conquest there is no more stirring episode than this march of 500 underfed and virtually barefoot men. These Mormons broke the first wagon road across the southwestern desert—and when mules died of starvation and thirst the men themselves dragged the wagons over the rough terrain.

David Warren, central character in the book, was a Mormon-hater until circumstances placed him near death in the home of one of those he had been persecuting. He was converted to the faith of the Latter Day Saints, and became a member of the battalion.

Paul Bailey has given historical accuracy to a novel of gripping interest. And in the background is a vivid portrayal of the weakness and strength of human nature as it was nearly a century ago—and as it probably remains today.

Lymanhouse of Los Angeles, publishers. 386 pages. \$2.50.

R. H.

STORY OF INDIANS TOLD IN THEIR EARTHENWARE

In POTTERY OF THE AMERICAN INDIANS, Helen E. Stiles presents the history of a people through an absorbing study of their hand-wrought earthenware. Handicrafts, she believes, grow out of the daily needs of the people. With exquisite detail, the author describes just how pottery is made, how tools are employed, and discusses the objects, animals and ideas that inspire the artistic design, and how these designs symbolically interpret the feelings, ideas and religion.

"To understand the present and to prepare for the future, we must know something of the past," is the theme upon which Miss Stiles builds her story of the real significance of pot-

tery from the primitive to the present. She describes the renaissance of arts and crafts of the Indians of Mexico, and follows the pottery-makers into the Southwest where she introduces the reader to the outstanding persons and families now engaged in carrying out the ancient tradition in the United States. Among those mentioned are Maria Martinez of San Ildefonso and Julian, her husband, of World's Fair fame.

Fascinating text, profusely illustrated, this book captures the imagination and spurs the reader on to further study of this precious heritage of the Indian. Although designed primarily for young people, the story will be enjoyed equally by grown-ups. For the particular benefit of teachers and students, the author has listed many sources of material for further research.

Illustrated with halftone photographs. Endpapers, jacket and line drawings by Marian Downer.

E. P. Dutton & Co., Inc., New York 1939. 165 pp. cloth, \$2.50.

LEGEND OF THE PALM TREE COMES FROM BRAZIL

Folk tales are common coin among children of all countries. In the retelling and translation of THE LEGEND OF THE PALM TREE, Brazil gives to the children of the United States the story of that ancient symbol of victory, rejoicing and immortality. Interpreted in words by Margarida Estrela Bandeira Duarte and in picture by Paulo Werneck, the handsome book was the winner of a prize awarded by the children's literary committee of the Brazilian ministry of education and has been published here through the cooperation of that ministry as a gesture of good will.

The theme of the legend of the life-giving tree may be compared to America's own Hiawatha in the parallel between the story of the palm and that of Indian corn. Just as the maize gave life to a starving people, so did the palm tree give life, food, drink, shelter and clothing to the three survivors of a terrible drought that turned a fertile land into a burning desert.

From Carnauba, the spirit of the palm, the Indian boy learns the secret of quenching thirst from the tree's sap. There are other discoveries and finally, armed with his new-found knowledge, he goes forth to teach the people of other lands to plant the seeds, that plantations of the "Good Tree of Providence" may stand swaying where the desert once had been.

Grosset & Dunlap: New York 1940. Unpagged, \$1.00.

WILD CRITTER OF THE OLD WESTERN RANGE

The Texas Longhorn made more history than any other breed of cattle the world has ever known. In this attractive and comprehensive volume, THE LONGHORNS, J. Frank Dobie tells their story. He delves thoroughly into the background of the gaunt, intractable, wild-living critters, the pioneers of the cattle country. From the days of the Spanish conquistadores, who brought their cattle with them, through early ranching and the turbulent times of "Mavericks and Mavericks," in the terrible excitement of the stampede, to the long Chisholm Trail and the breed's near-extinction, we back-trail with Mr. Dobie, into longhorn folklore, legend and history.

The author is a veteran rancher, prospector and above all, a natural story teller. He has talked with scores of old-timers in that part of Texas where the longhorn made his last stand. Their names, many of them familiar to those who know the Southwest, run through the book. The result is a story that is authentic. It is told honestly and without literary embellish-

ment. It well deserves its place in Americana as the first book ever written exclusively on longhorn history of the semi-desert country.

Tom Lea's illustrations are as alive and sinewy as the story itself. The jacket-frontispiece, painted for the U. S. postoffice in Odessa, Texas. Woodcuts punctuate each chapter.

"Longhorns" closes with a photographic rec-

ord, 48 pictures of the various types, sizes and ages of longhorn cattle, past and present. Altogether, the book is one of the most vital, easy-to-read chronicles we have had from the Southwest in a long time, a book not just to be read, but a book to keep.

Little, Brown & Co., Boston. \$3.50. Bibliog., index, 388 pp. MARIE LOMAS.

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By RANDALL HENDERSON

I CAN understand the deep reverence the Indians have for the elements of Nature—the homage they pay to the gods of rain, of fertility, of the sun. One cannot live close to the desert without acquiring a profound respect for the God who planned this universe and who keeps it functioning according to inviolate laws which we call Nature.

We all have an elementary knowledge of Natural law—but it is very elementary, even among the wisest of our human family. Just about the time I think I am beginning to understand some of Dame Nature's rules, I encounter a new situation that leaves me completely baffled.

For instance, last weekend I drove to Borrego valley in the Southern California desert to see the wildflowers. I went to the homestead of L. A. Bowers where last year a half-section of sand dunes was completely carpeted with verbena and evening primrose. The dunes are covered with flowers again this season—but they are dandelion and pincushion and chicory. Last year the predominating color was purple—this season it is yellow. I found just an occasional verbena trying to find its way up through the foliage of the dandelions.

No seed was ever planted here by the hand of man. It is Nature's flower garden. With ample rainfall both seasons, why did she change the color scheme this spring? Why did the dandelion seeds which obviously were in the ground, lie dormant last season while verbena and primrose put on the show?

We humans are still only in the kindergarten of Mother Nature's school. If you doubt that, read Dr. Alexis Carrel's "Man, the Unknown."

* * *

While we are on the subject of flowers, I want to put in a word for the desert dandelion. Don't confuse it with the persistent little domestic weed that makes a nuisance of itself in your home lawn. The desert member of the dandelion family is a lovely flower that never intrudes on peoples' lawns. It is a little wildling with a blossom that is brimming with sunshine.

* * *

At Borrego park headquarters I met Darwin Wm. Tate, California's superintendent of state parks. He told me of his plans for making the Borrego area more accessible to visitors. Next year, if his program is approved by the park commission, a road is to be constructed from Truckhaven on Highway 99 across the Borrego badlands to Borrego, and another road extended up Coyote canyon following the route blazed by Capt.

Juan Bautista de Anza and the first California colonists in 1775-76.

With these two routes open, I am predicting Borrego valley will take its place next to Palm Springs and Twentynine Palms as a mecca for Southern California desert weekenders.

* * *

Some of my friends are worrying about what is going to happen to the world in general and Americans in particular when the war bubble bursts.

I do not know the answer, but I have an idea we are going to have to readjust ourselves to some radical changes in our present way of living—changes that in the long run will be good for us.

We've carried the competitive idea too far—both as nations and as individuals. The present war is the product of it—competition for world's markets and national wealth. Competition in our business life has made chiselers out of most of us, and thrown millions out of work. One of my friends resigned a fine executive position a few months ago and gave as his reason, "A man can no longer hold his own in the dog-eat-dog competitive struggle for business—and remain a gentleman."

Oh, I wouldn't eliminate conflict from this world. Without an element of competition we would decay. I find conflict everywhere on the desert. It is part of Nature's plan. But Nature follows the rule of moderation — and when a man acquires \$1000 he wants a million. If he has a little store he wants a chain of them.

There's a place for competition, even conflict. But let's quit competing for the essentials of life—our food, our clothing, our shelter. There are enough of these things for everyone. Let's pass them out on a cooperative plan so everyone will have an adequate share—and compete only for the real luxuries of life—in the fields of knowledge and art and science and human understanding.

I believe in consumer cooperatives—that will solve the problem of providing me an adequate share of bread and butter and shirts and living quarters. And then my leisure time will be free to battle with my neighbors as to who can take the best photographs, write the best stories, invent the best mouse traps, hike up the highest mountains, play the most harmonious music, learn the most languages and raise the biggest radishes. That's my idea of competition. And when we do that there'll be no more wars nor picket lines nor WPA.

What has all this to do with the desert? Well, only this—it is a rather idealistic sort of a program and the desert breeds idealism. The way of life that Jesus Christ proposed for us was dreamed and planned on the desert.

Writers of the Desert . . .

MARGARET and LEROY BALES traveled over many miles of rough desert trails to gather the material for their story of the old ghost town of Ballarat for readers of the Desert Magazine this month.

The Bales reside in Los Angeles, where Leroy is a deputy sheriff and Margaret a former newspaper feature writer who is now proving that an ex-newspaper woman can really be quite domestic when she tries.

Photography is their hobby, especially desert places and people—and one of their favorite indoor sports is boasting about the inaccessible places they have reached in their desert car. They are particularly fond of washboard roads. Companions on their trips are their two dogs, Mike—mostly Shepherd, and Bodacious—mainly setter.

CHARLES KELLY, author and traveler whose stories appear frequently in Desert Magazine, recently left his home city of Salt Lake to spend several months in the heart of the southern Utah wilderness. He has long looked forward to the opportunity of going into a region so remote he'll only get his mail every two or three months—and now his dream is to come true. He plans to explore areas that have never been accurately mapped — and write. He has promised to write some of his experiences for Desert Magazine readers.

JOSEPH MUENCH'S unusual outdoor pictures appear frequently in Desert Magazine,

but he has no corner on the talent in the Muench family at Santa Barbara, California. As evidence — the entertaining story Navajo Sing written for this number of the magazine by JOYCE MUENCH, the domestic half of the family.

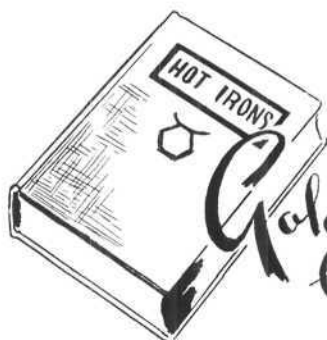
The Muench Pictorial studio is famous for its fine photographs of Indian life. Photography and writing are both the vocation and the avocation of Joyce and Joseph. They spend their vacation periods hunting in the desert region, and "bring 'em back alive" with their cameras and typewriter.

Their illustrated features have appeared in

New York Times, Michigan Motor News, Arizona Highways, California Monthly, Sierra Educational News—"and to our great delight, The Desert Magazine."

MONUMENT HONORS THE PADRE OF THE DESERT

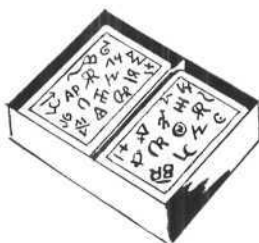
Erected by the side of the highway on the spot where the beloved priest was killed, a cross was dedicated in March to the memory of Msgr. John J. Crowley, padre of the desert. Father Crowley's parish was largest in the United States, covered 11,000 square miles of Death Valley, the Mojave desert and the high sierra, ranged from the below sea-level depth of the desert to Mt. Whitney, the country's highest peak. The priest traveled every week from Death Valley to Lone Pine and Bishop, saying mass in each place, a trip of 165 miles each Sunday.



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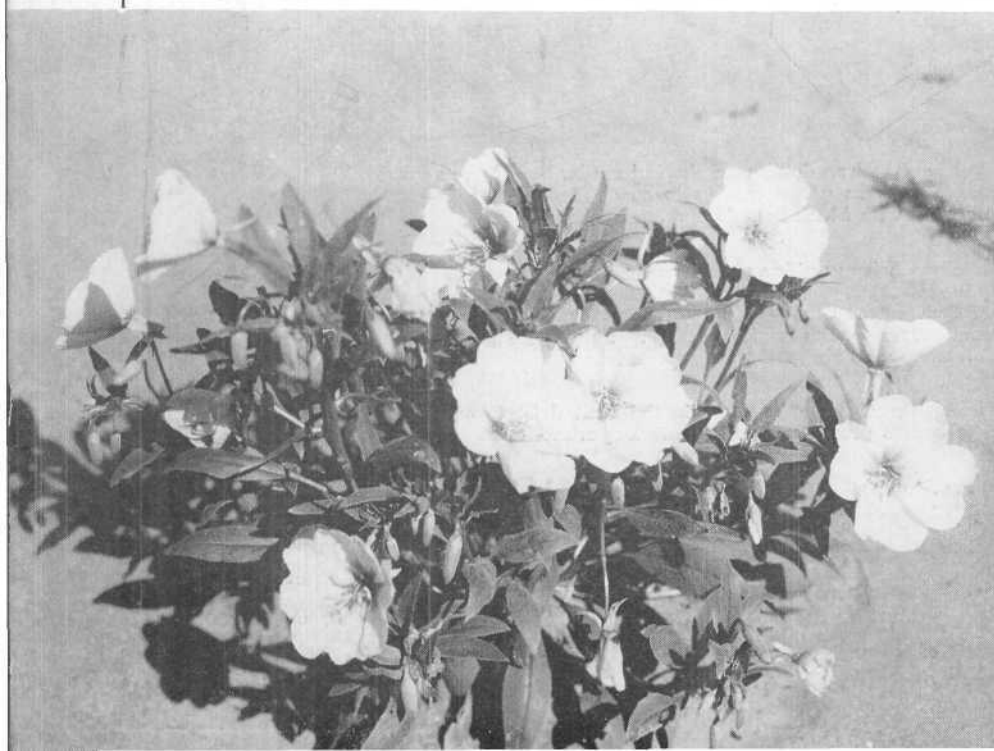
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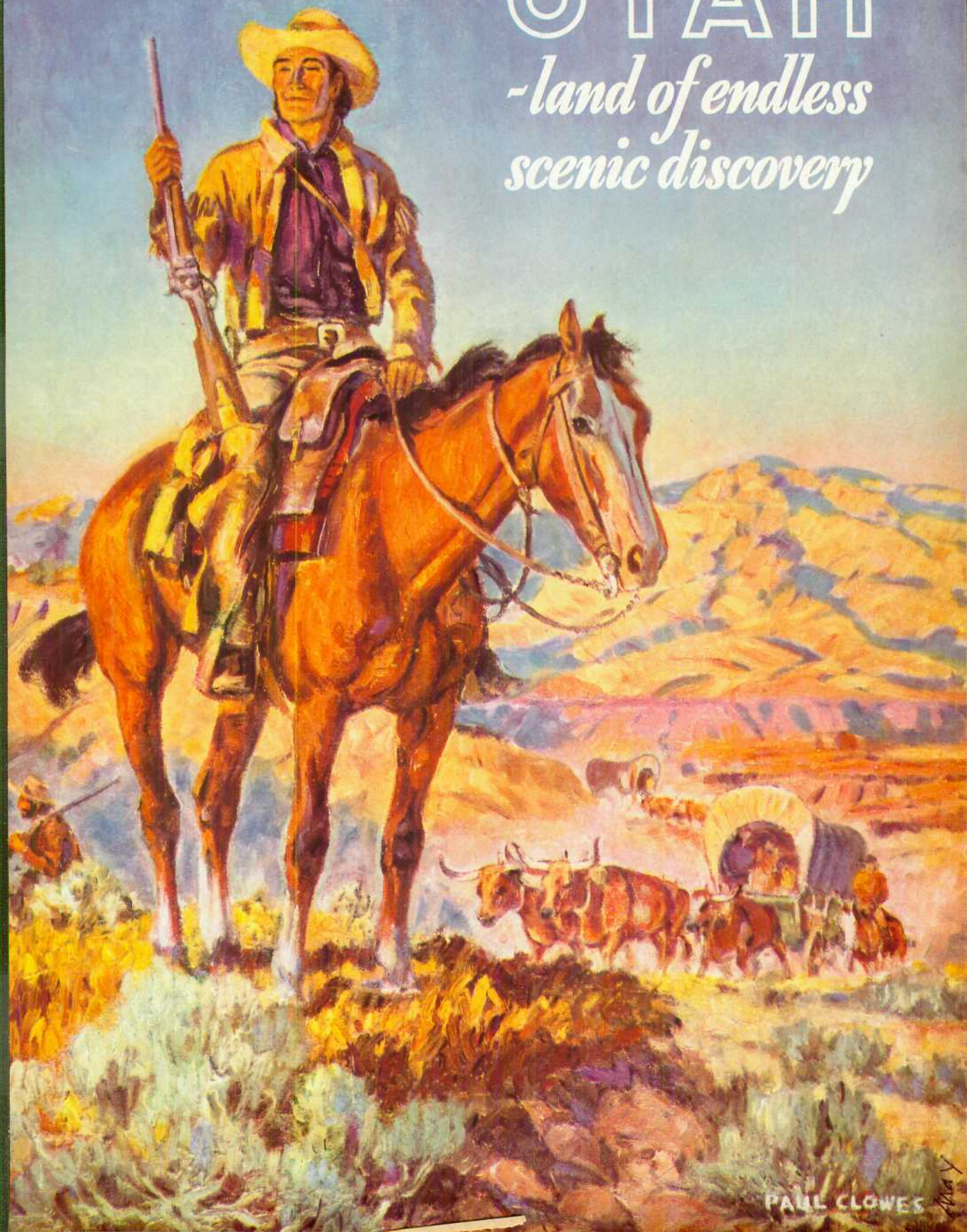
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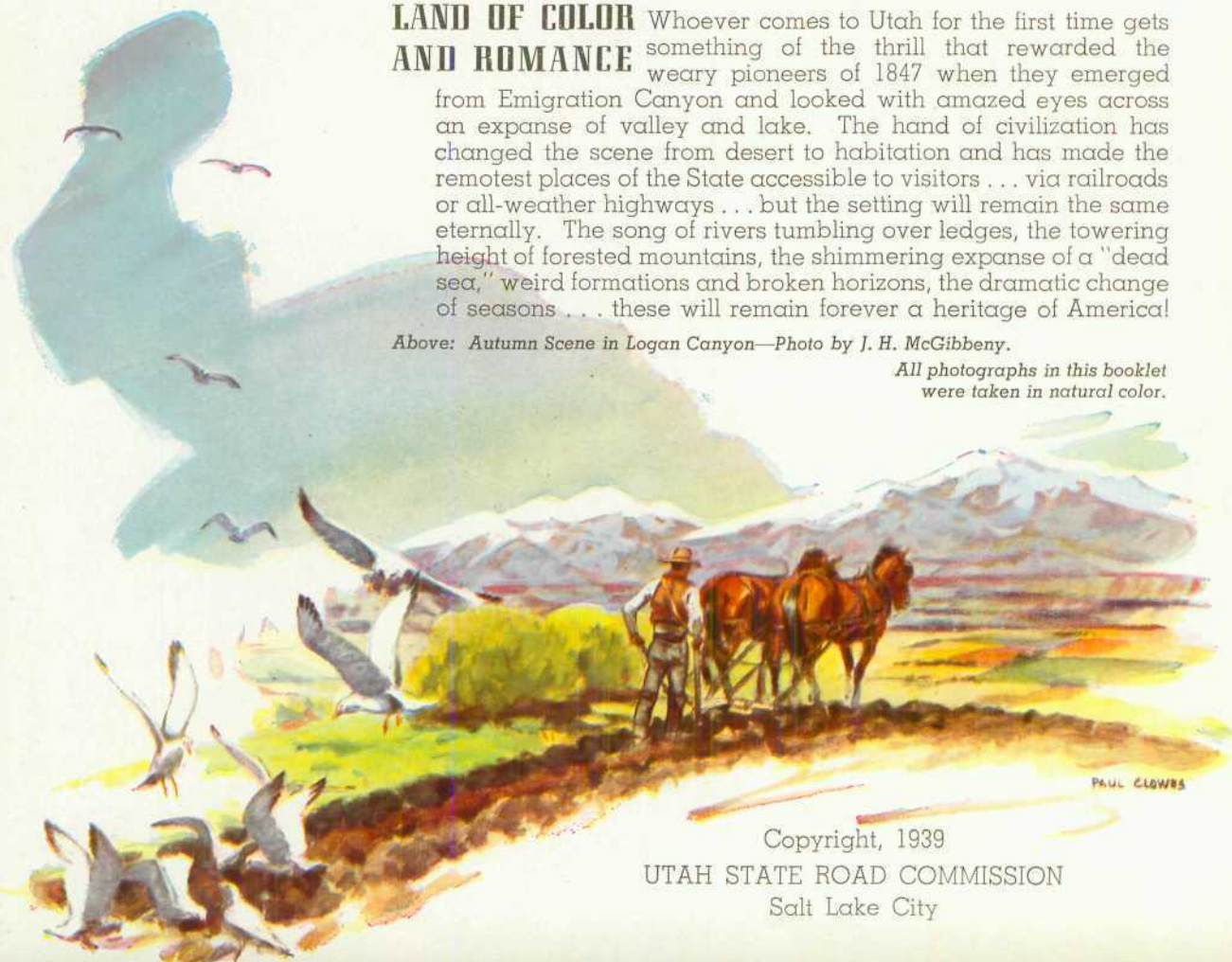
PAUL CLOWES



LAND OF COLOR AND ROMANCE Whoever comes to Utah for the first time gets something of the thrill that rewarded the weary pioneers of 1847 when they emerged from Emigration Canyon and looked with amazed eyes across an expanse of valley and lake. The hand of civilization has changed the scene from desert to habitation and has made the remotest places of the State accessible to visitors . . . via railroads or all-weather highways . . . but the setting will remain the same eternally. The song of rivers tumbling over ledges, the towering height of forested mountains, the shimmering expanse of a "dead sea," weird formations and broken horizons, the dramatic change of seasons . . . these will remain forever a heritage of America!

Above: Autumn Scene in Logan Canyon—Photo by J. H. McGibbeny.

All photographs in this booklet were taken in natural color.



PAUL CLOWES

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UTAH STATE ROAD COMMISSION
Salt Lake City

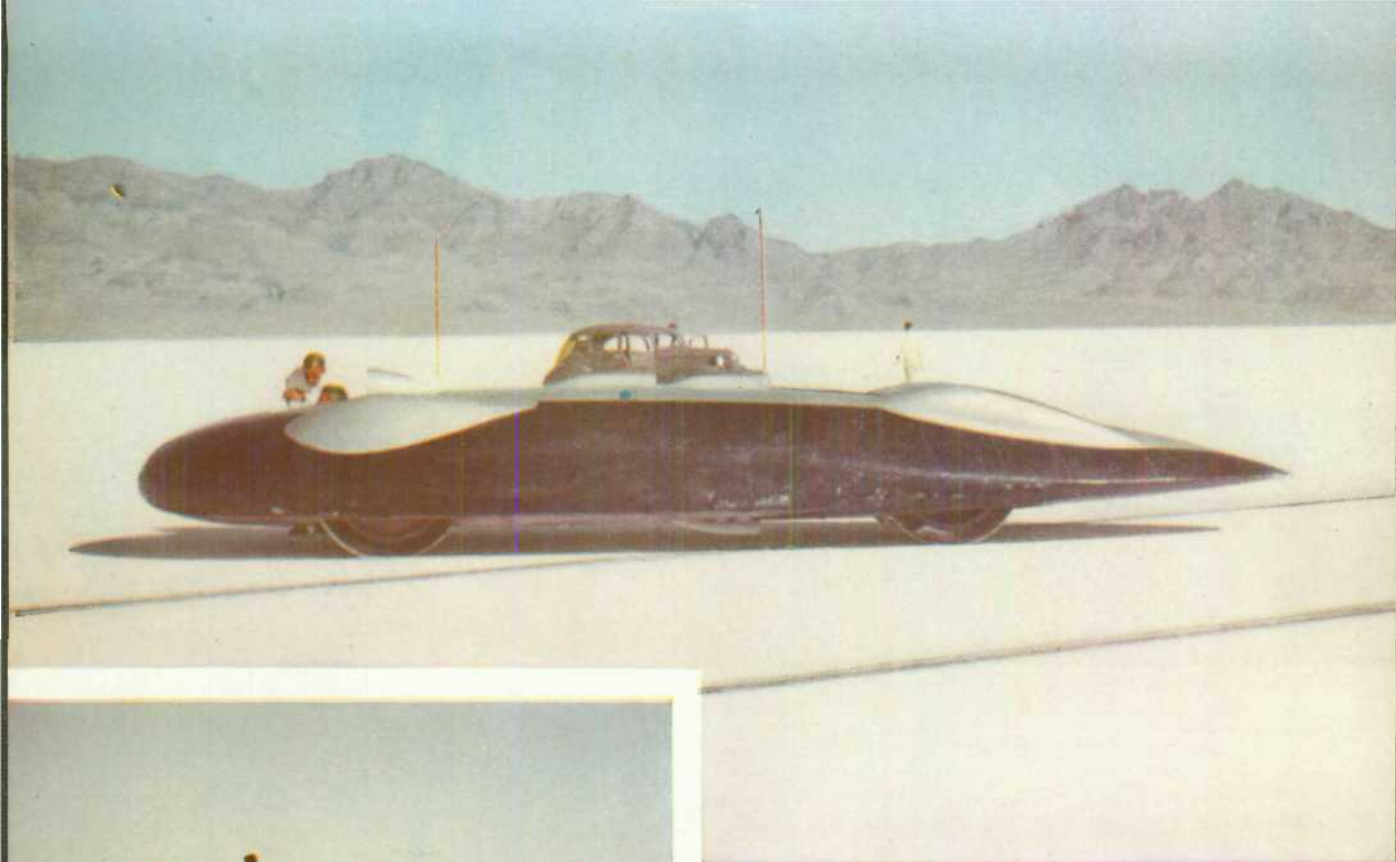


VAST EMPIRE OF INDUSTRY

Nearly a century has passed—a century of progress and incredible change—since Brigham Young said with prophetic assurance: "This is the place!" Now, side by side, stand such historic landmarks as the Mormon Temple and Tabernacle and the stream-lined structures of a modern era . . . irrigation has made the desert to blossom as a rose; cattle by the millions range the valleys and hills; the greatest mining and smelting center of the world has been established; modern factories have supplanted the primitive shops of frontiersmen; the isolation of a wilderness has vanished with the coming of a network of highways, railways, and airways—all merging at beautiful Salt Lake City, industrial and scenic center of the Intermountain West! Salt Lake's strategic location on the nation's web of travel-ways makes it the ideal starting place for such trips as Yellowstone National Park and the Grand Canyon of the Colorado—two of the world's outstanding scenic marvels. Either of these spectacular places can be reached in one day's driving from Salt Lake City.

On This Page: Silhouette of State Capitol Dome—Photo by Randall L. Jones, Union Pacific; Seagull Monument—Photo by Randall L. Jones; Mormon Battalion Monument—Photo by George W. Davy; World Famous Mormon Temple—Photo by Randall L. Jones.





FASCINATING SIDE TRIPS Delightful trips through the countryside, over fine paved highways, lead away from Salt Lake City to many nearby points of interest. Fifteen miles to the westward is the Great Salt Lake, offering the novel thrill of water so dense with salt that you can't sink! Beach interests center at historic Saltair, with its delightful bathing, boating and dancing. A couple of hours more of pleasant driving brings you to the world-famed Salt Flats, where Ab Jenkins of Utah has set 148 world speed records and where Captain George E. T. Eyston in 1938 drove his "Thunderbolt" at 357 miles per hour over the measured mile, a world record which stands as an amazing challenge! That the challenge will be met in 1939 is altogether probable. Spectators find the drive to the Salt Flats delightful and the show, thrilling.

On This Page: John R. Cobb's "Railton"—Photo by J. H. McGibbeny; Capt. Eyston and His "Thunderbolt"—Photo by Ralph C. Pendleton; Air View of Utah Copper Mine at Bingham Canyon—Photo by Western Air Express; Utah Lake—Photo by Eldredge; Mt. Ben Lomond near Ogden—Photo by Weldon Burnham.



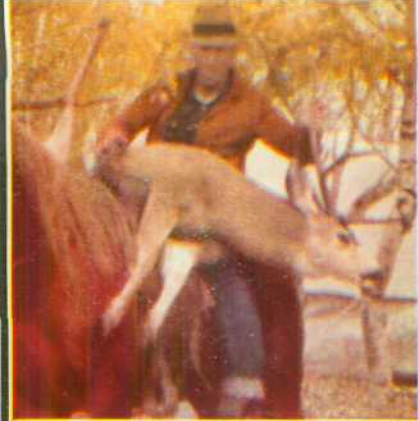


MOUNTAINS AND MINING

Bingham, twenty miles from Salt Lake, is another unique point of interest, being the site of the largest open-cut copper mine in the world. The greatest smelting industry of the Nation is located in the same general area. Or a half hour's drive from the City, through any one of six rugged canyons, brings you to the heart of a mountain wilderness. Majestic Ogden Canyon and beautiful Weber Valley, skirting mountains and lake, are only an hour's drive to the northward. Ogden is a thriving industrial and railroad center, offering unique attractions in scenery and pleasure to visitors. Traveling another fifty miles to the northward, through beautiful Sardine Canyon, motorists reach picturesque Cache Valley and Logan, its thriving metropolis, famed for its schools and its majestic river and rugged, forested canyon.

On This Page: Beach on Great Salt Lake—Photo by W. D. Green; Floating Like A Cork in Great Salt Lake—Photo by Mrs. Hugh Coleman; Boat on Great Salt Lake—Photo by George Waters; Lucin Cutoff, showing railroad trestle across Great Salt Lake—Photo by R. L. Jones; Fort Douglas Golf Course—Photo by W. D. Green.





ABUNDANT WILD LIFE IN UTAH

As a hunting and fishing area, Utah is unsurpassed. Her thousands of streams and lakes are well stocked with trout and her mountainous regions abound in deer and elk. About 75,000 deer licenses were issued in 1938, hundreds of them to big game hunters from many parts of the country. Duck hunting in Utah ranks with the finest in America. The Bear River Migratory Wild Fowl Refuge is the largest bird sanctuary in the world. Pheasants are abundant. The State of Utah Fish and Game Department, in stocking streams and protecting and nurturing game, is doing a notable work in conserving wild life.

Top Of Page: Hunter and Deer—Photo by Dr. J. L. Huchel; The Catch—Photo by Randall L. Jones; Right: Pheasants—Photo by Bill Shipler; Bottom: Packing-in at Granddaddy Lakes in The Uintahs—Photo by Dr. Ralph C. Pendleton.



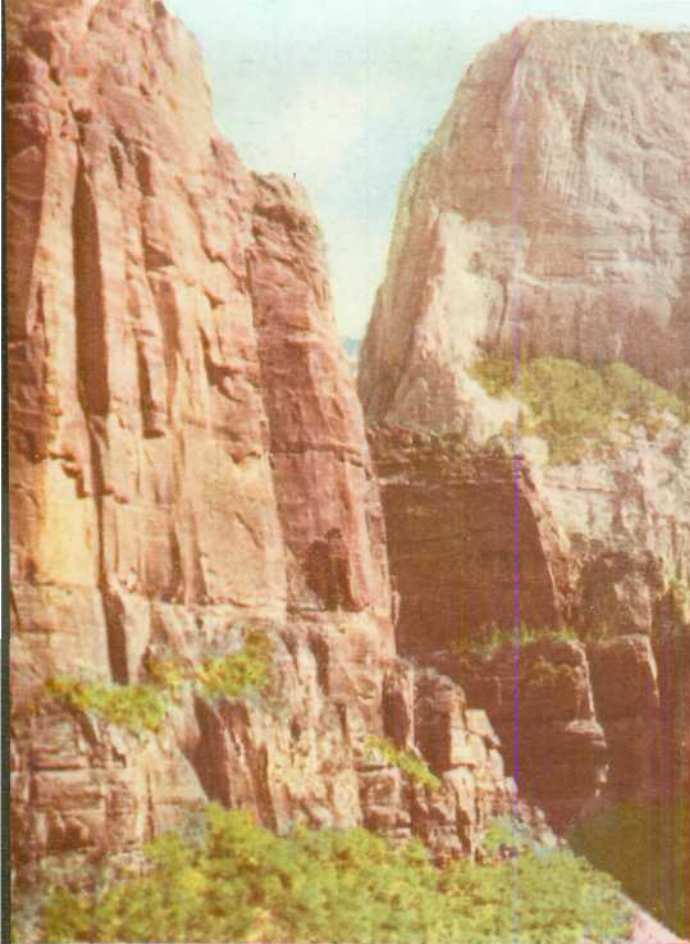


ROMANTIC WINTER FUN

According to ace ski-men from all parts of the world, Utah is unexcelled as a natural winter playground! Among the many areas providing open winter roads and ideal terrain for snow fun are three of the canyons near Salt Lake City. For seven months of the year, skiers can enjoy their favorite recreation at Alta, located 25 miles from Salt Lake City, at an elevation of 8,750 feet. The resort has 10 feet of winter snow and one of the finest chair-type ski lifts in the country. In the 1939 National Ski Meet at Ecker's Hill, these world-famed jumpers participated: Oimoen, Olav Ulland, Alf Engen, Anderson and Tom Mobraaten. A score of other Utah communities have taken up the sport. Notable among them are Ogden and Logan.

Photos of Skiing: Top, Right and Bottom by Hal Rumel; Photo At Left by Eastman Kodak Co.

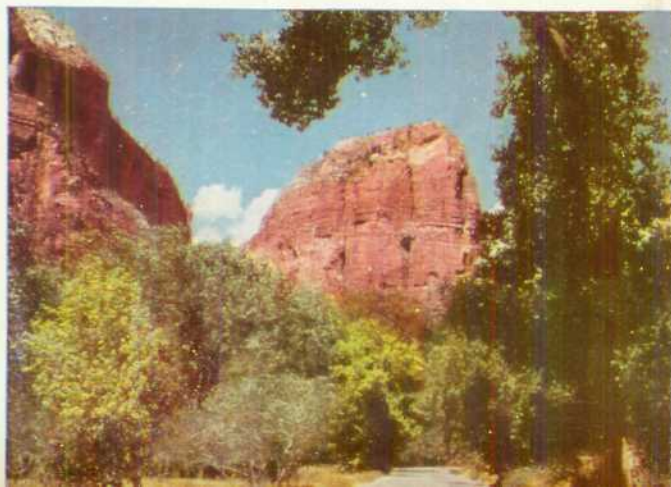
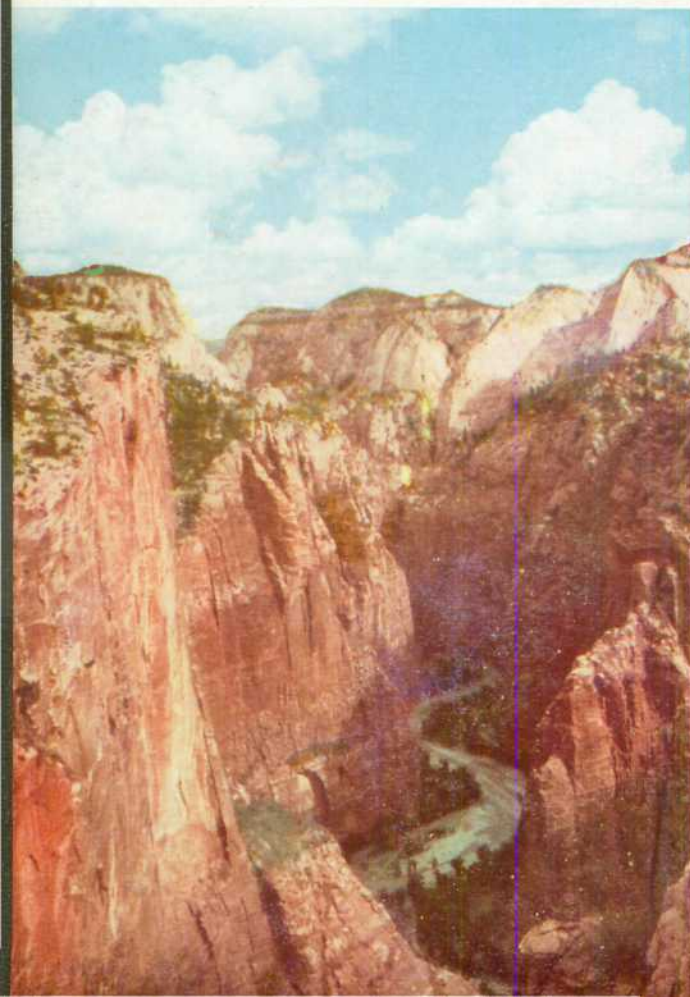


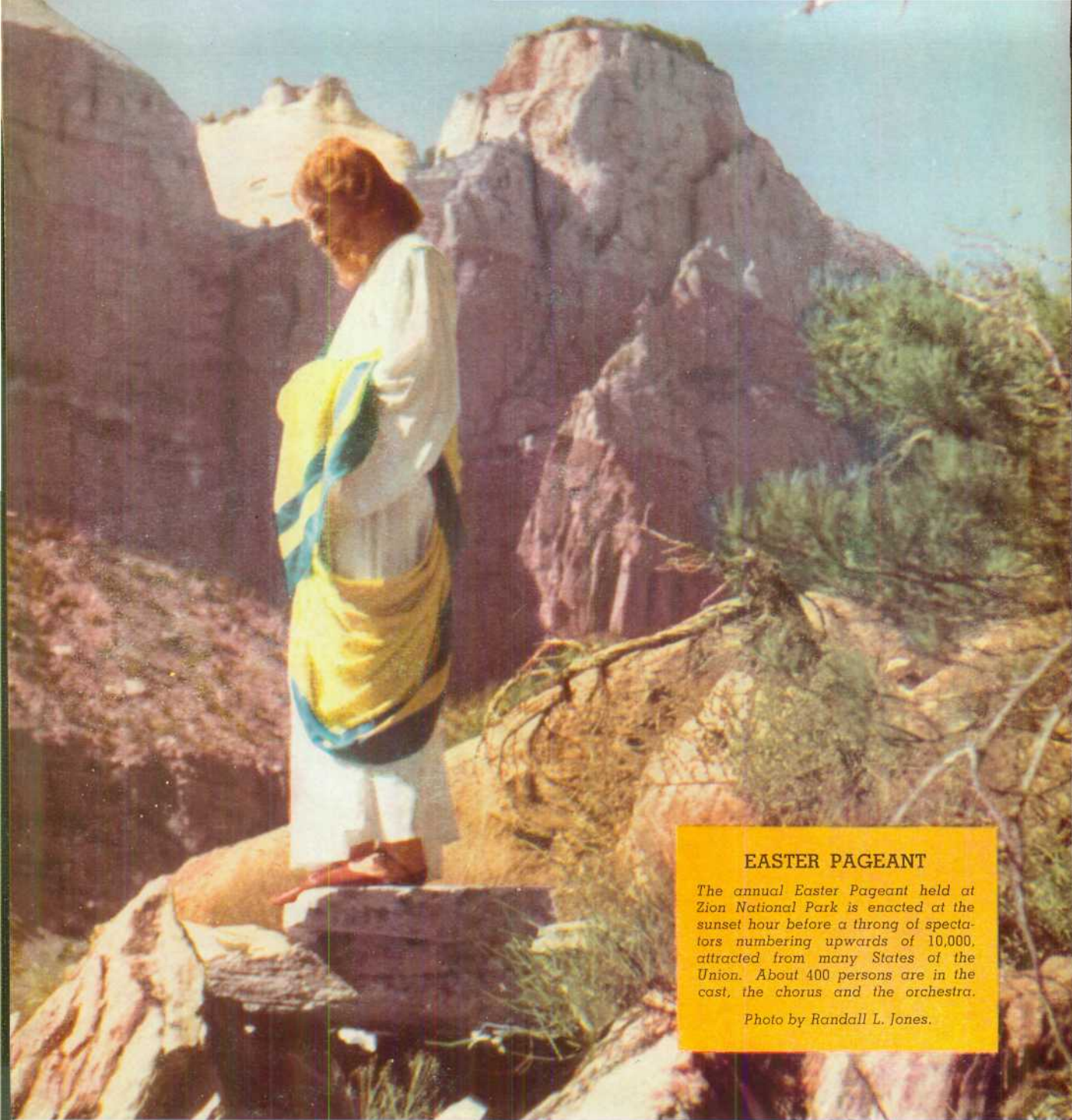


SCENES IN ZION NATIONAL PARK

For vastness, height, depth, glory of color and strangeness of geologic formation, Zion National Park stands unique! You drive your car through its spacious portals, park it in a forest of giant trees, and then proceed afoot through a mile of winding trail along the Mukuntuweap River. Above you, a stone's throw apart, rise the sheer walls of the mighty gorge to a height of nearly 3,000 feet. And every step of the way, changing vistas of grandeur! Equally thrilling is the panorama of Zion as viewed through the windows of a mile-long tunnel on the world famed Mt. Carmel Highway. You can get a memorable glimpse of Zion National Park in a visit of hours or linger for a month of scenic exploration in its 14-mile-long canyon and mysterious terrain.

Top: Great White Throne—Photo by Randall L. Jones. Bottom: Left to Right—Zion Canyon Viewed from The Rim—Photo by W. D. Eldredge; Angel's Landing, in Zion—Photo by Randall L. Jones; View Through Window of Mt. Carmel Tunnel—Photo by Bill Shipler; Highway Approach to Zion Park—Photo by R. L. Jones.

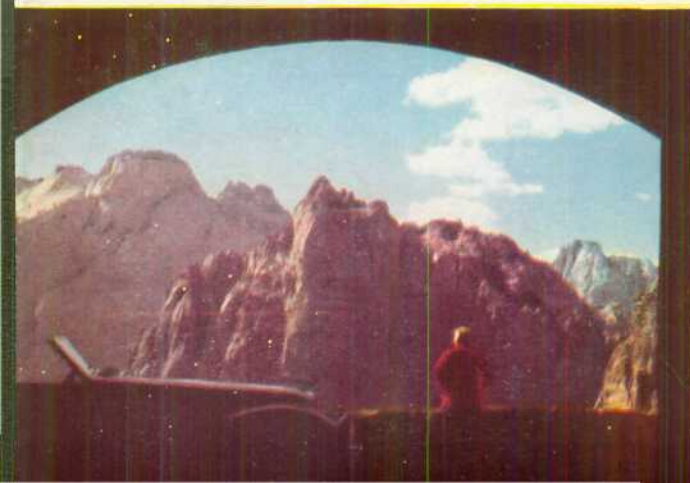




EASTER PAGEANT

The annual Easter Pageant held at Zion National Park is enacted at the sunset hour before a throng of spectators numbering upwards of 10,000, attracted from many States of the Union. About 400 persons are in the cast, the chorus and the orchestra.

Photo by Randall L. Jones.

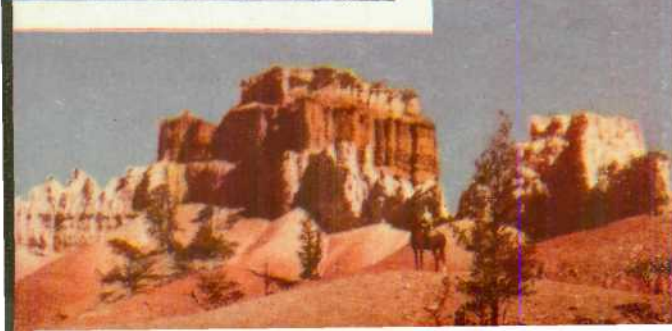
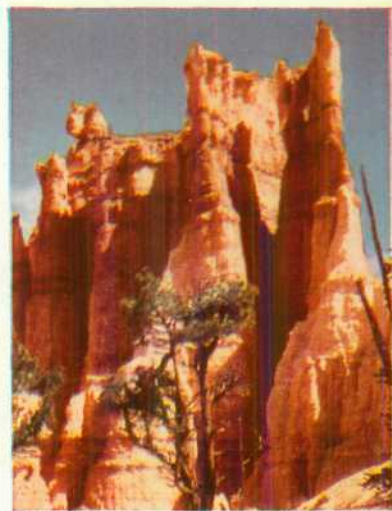


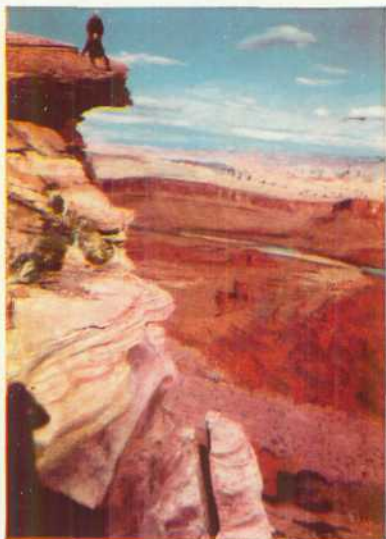


FANTASIES IN FORM AND COLOR

Gorgeous Bryce Canyon and the Cedar Breaks, a National Monument, are both easily reached by automobile and are only a short distance apart. To see either of them is to feel that Nature must have there exhausted her genius for wild distortion and flaming color. Yet each is highly individual in its display of startling beauty and profound mystery. Every person in quest of thrills must see both of these world wonders!

Top: Bryce as viewed from Sunrise Point—Photo by W. D. Eldredge; Left: Bryce from Rainbow Point—Photo by Eldredge; Right: Gulliver's Castle in Bryce—Photo by Rumel; Bottom: Fairy Temple in Bryce—Photo by Rumel; Cedar Breaks—Photo by Jones.

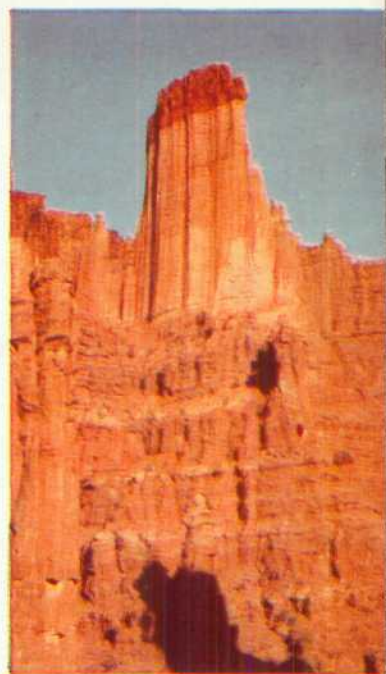




BEWILDERING SCENIC PANORAMA

Grand Canyon of The Colorado when seen from the North Rim is a vast eroded area, lavish in coloring, with delicately misted horizons. From Bright Angel Point, the awed spectator can view its kaleidoscopic changes, in the shift of sun and shadow, for hours on end. The upper Colorado, near Moab, is also a region of flawless and delicate beauty that no one should miss seeing!

Top: Orange Cliffs, Colorado River, near Moab—Photo by W. D. Eldredge; Red Canyon, Approach to Bryce—Photo by Randall L. Jones; Left: Cliff over Colorado River, near Moab—Photo by J. H. McGibbeny; Right: "Organ and Choir," near Moab—Photo by J. H. McGibbeny; Bottom: Bright Angel Point, North Rim, Grand Canyon—Photo by R. L. Jones.





INTERESTING INDIAN LIFE

Among Utah's many tribes of Indians are the picturesque Navajos who inhabit the extreme southeastern corner of Utah, providing an incidental interest for travelers who wish to explore the magnificent scenery of a remote, yet accessible, region. A visit to this strange land has all the thrill of discovery . . . the dual fascination of a strange aboriginal people in a desert setting. Southeast Utah is one of the last frontiers of the world, a region thinly inhabited but vastly rich in scenery of wild geologic formations. The largest natural bridges in the world are in this area.

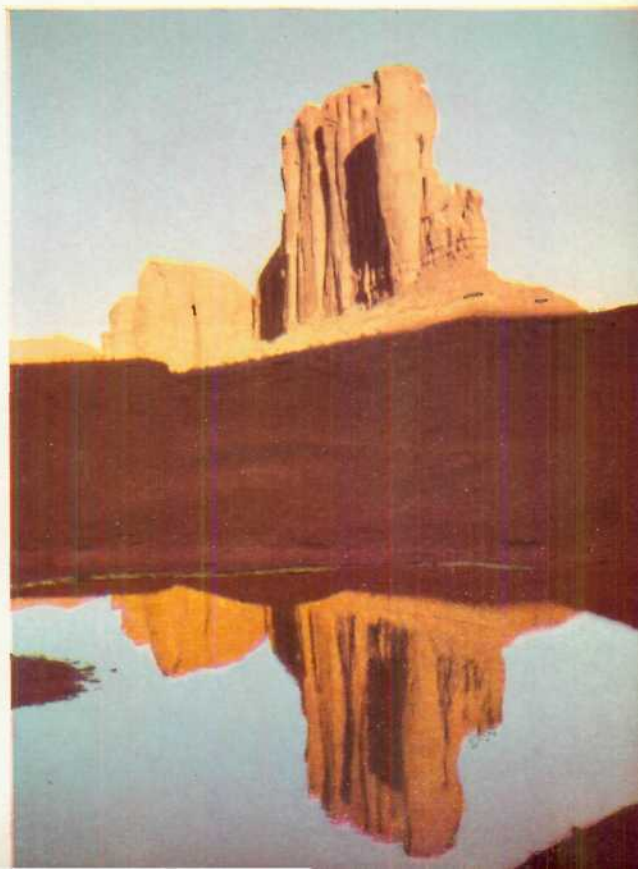
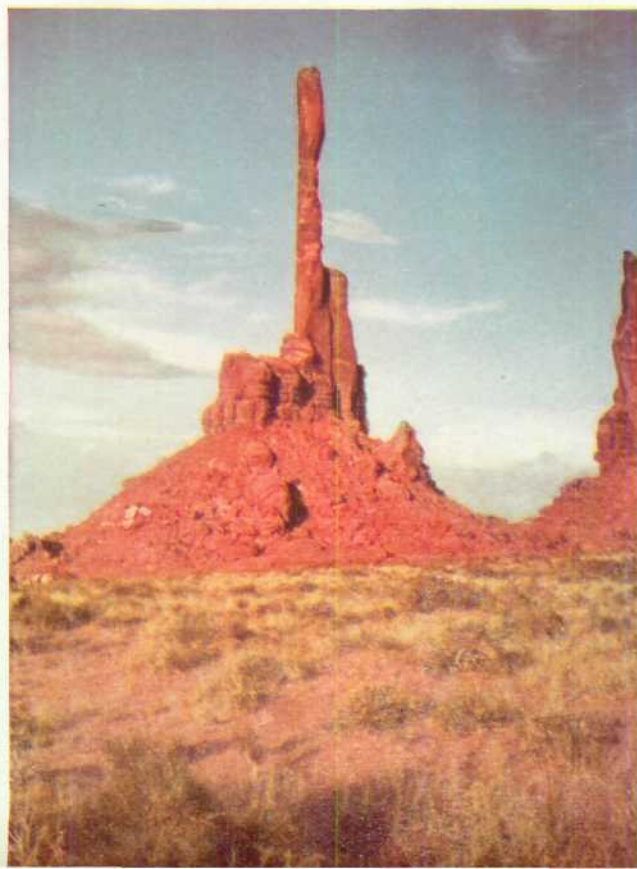
Top: Hopi Indian Boy—Photo by Hal Rumel; Sacred Navajo Mud Dance; Left: Navajo Woman Weaving; Right: Navajo Woman; Bottom: Awed Indian Braves View Airplane in Desert—Photos by J. H. McGibbeny.

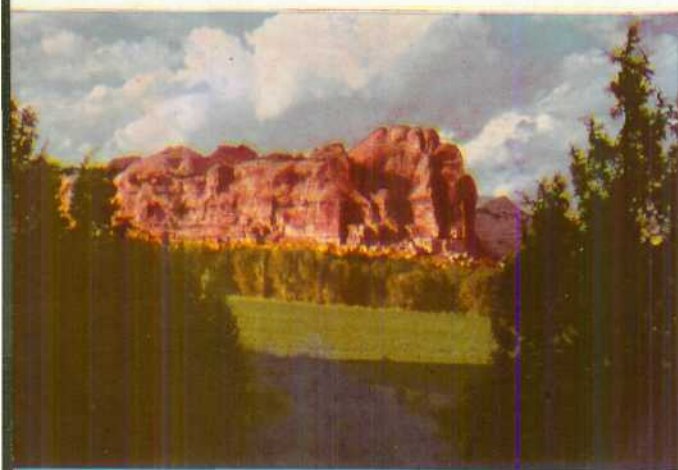




This appealing view of Turret Arch, seen through the North Window, is typical of the formations of Arches National Monument. The region is near Moab, a few miles off the main highway and easy to reach via automobile. The Totem Pole—below, left—is said to project an evening shadow 35 miles across the desert. The third picture is a cliff in Monument Valley reflected in a water hole.

All photographs on this page are by J. H. McGibbeny





ENDLESSLY VARIED SCENIC GRANDEUR

It is no exaggeration to say that there is within the boundaries of the State of Utah more, and more varied, scenic grandeur than in any other area of comparable size in the world. Zion National Park, Bryce Canyon and Cedar Breaks are indisputably unique. And equally exclusive are such regions as the Wayne Wonderland, Monument Valley, The Dinosaur Monument, The Natural Bridges, Fish Lake and the "Primitive Uintahs"—all lavishly endowed with strange and colorful scenes. The illuminated map on the back cover of this booklet reveals at a glance the routes to the places of scenic and industrial interest in Utah. The State has an excellent system of motor highways and railways. Camping and hotel facilities are everywhere adequate and the spirit of western hospitality prevails! Utah is especially proud of her climate. Clear skies and bright sunshine are the rule of the calendar. Four equable seasons, with no radical extremes of temperature, are a year-round invitation to come to Utah for pleasure and diversion.

This Page (Counter Clockwise): In Wayne Wonderland—Photo by George Waters; Haystack Peak in LaSalle Mountains—Photo by J. H. McGibbeny; Navajo Lake—Photo by Randall L. Jones; Sheep Creek in Uintahs—Photo by W. D. Green; Sheep Camp—Photo by Green.





SMILING VALLEYS— RUGGED LANDSCAPE

Utah is likewise rich in mountain landscape and pastoral scene of cultivated fields. The agricultural treasure of the State is a chain of fertile valleys running north and south. Excellent highways traverse their full length, providing motor trips that are an endless panorama of orchards, farms, ranches, range lands, plains, canyons, streams. Thriving cities and towns dot motorways, sometimes coming in view at brief intervals, sometimes far apart. Timpanogos, 30 miles south of Salt Lake City, is literally a "magic mountain." Vast, rugged, wooded, flower-strewn and snow-capped . . . it towers to a height of 11,957 feet. At its summit is one of the few glaciers on the North American Continent. Timpanogos Cave is a maze of fantastic geologic formations, tinted with a hundred shades of delicate pastels. The loop trip around the mountain is one of the world's supreme thrills! Provo City and Utah Lake are two other points of interest that can be conveniently visited on this memorable scenic tour.

This Page (Clockwise): Lake Mary at Brighton Resort—Photo by Hal Rumel; Mt. Timpanogos in Autumn—famous for its Cave, Glacier and Thrilling loop Highway—Photo by W. D. Green; the Upper Weber—Photo by W. D. Green; Lake in the Uintahs—Photo by Dr. Ralph C. Pendleton; Sheep Grazing—Photo by Randall L. Jones.





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